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RAILWAY AGE

THE TRANSPORTATION WEEKLY

JUL 8 1969

MID-YEAR REPORT:

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It's without form, without much pattern—but a year in which railroads are working hard for breakthroughs

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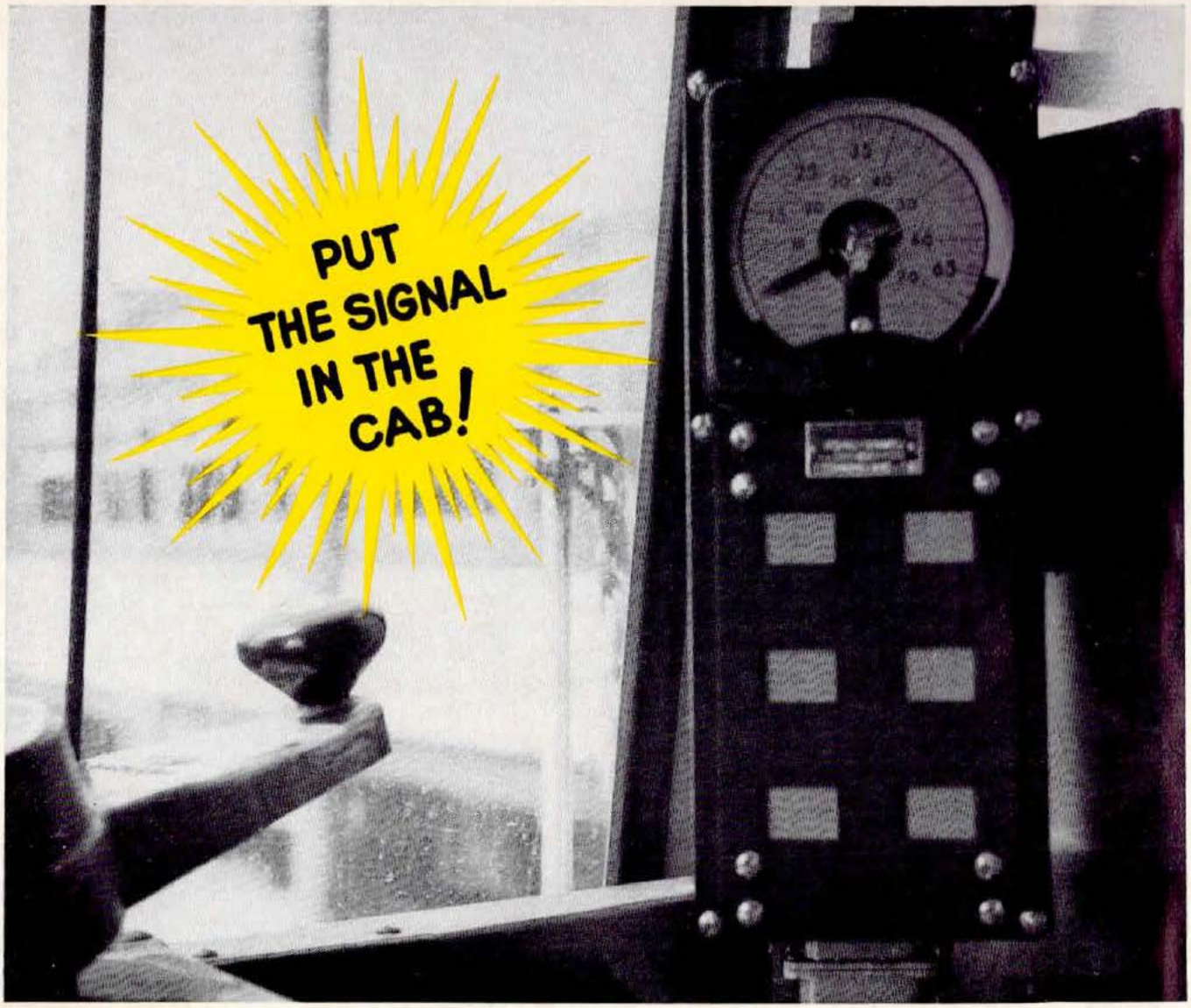

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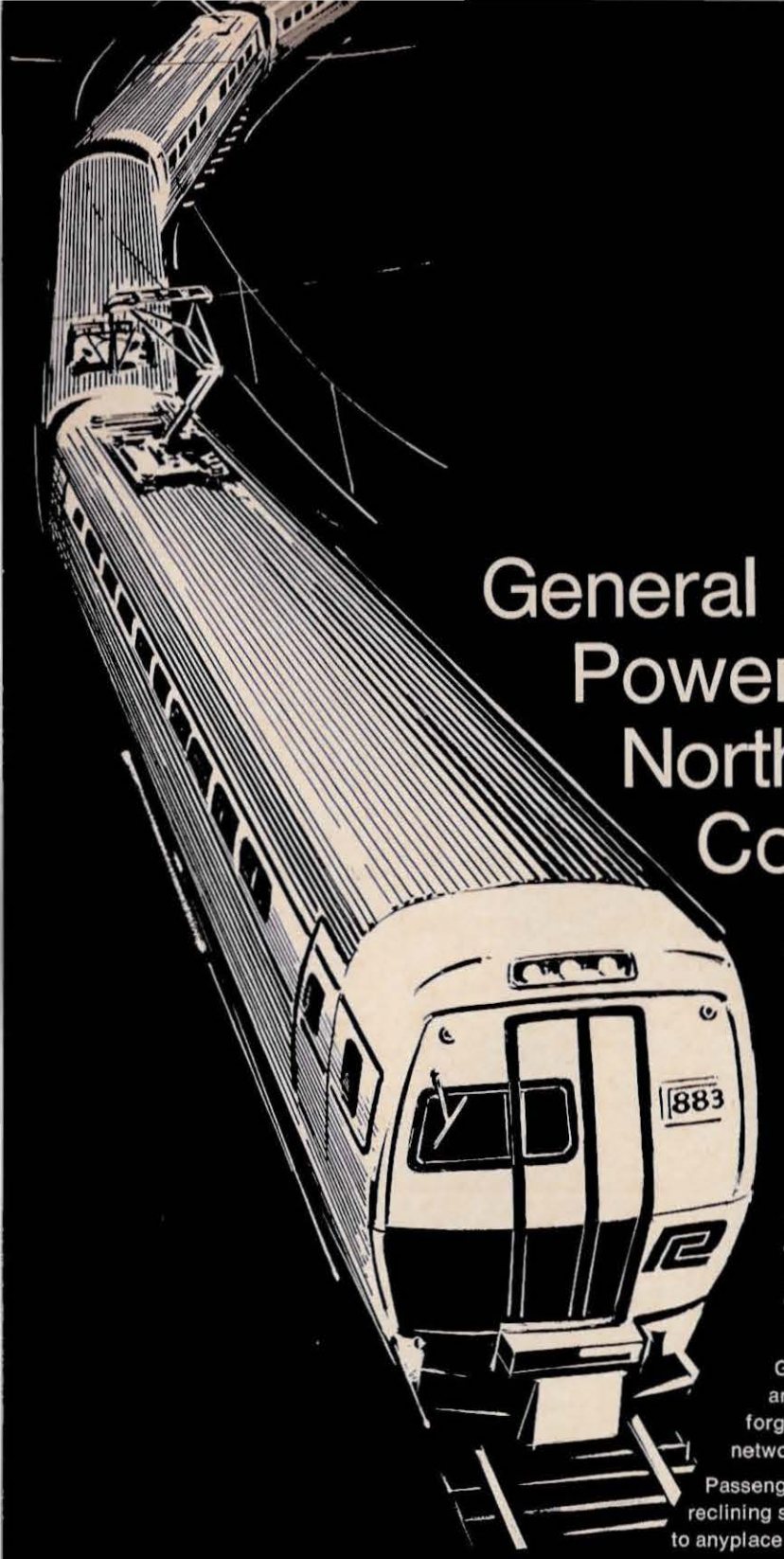

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GENERAL ELECTRIC

RAILWAY AGE July 7, 1969 • Vol. 167, No. 1

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. . . AND COMING NEXT WEEK

The Norfolk & Western has built an 8.4-mile line, costing more than $7 million, that is expected to bring important benefits in the movement of large amounts of coal. The coal now has 46 fewer miles to go before reaching its destinations. A report on the building of the line will appear in the July 14 Railway Age. Also in the same issue, a story about a new machine that eases the job of removing fouled ballast from beneath ties at turnouts and along station platforms.

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Philadelphia Commuters Gain 20 More Stainless Steel Cars

South Eastern Pennsylvania Transportation Authority had added 20 new nickel stainless steel commuter cars in a continuing modernization of the Philadelphia area rapid transit system. These cars, designed and built by St. Louis Car division of General Steel Industries, Inc., are lightweight design to permit operation in the 85mph range...with lower power requirements.

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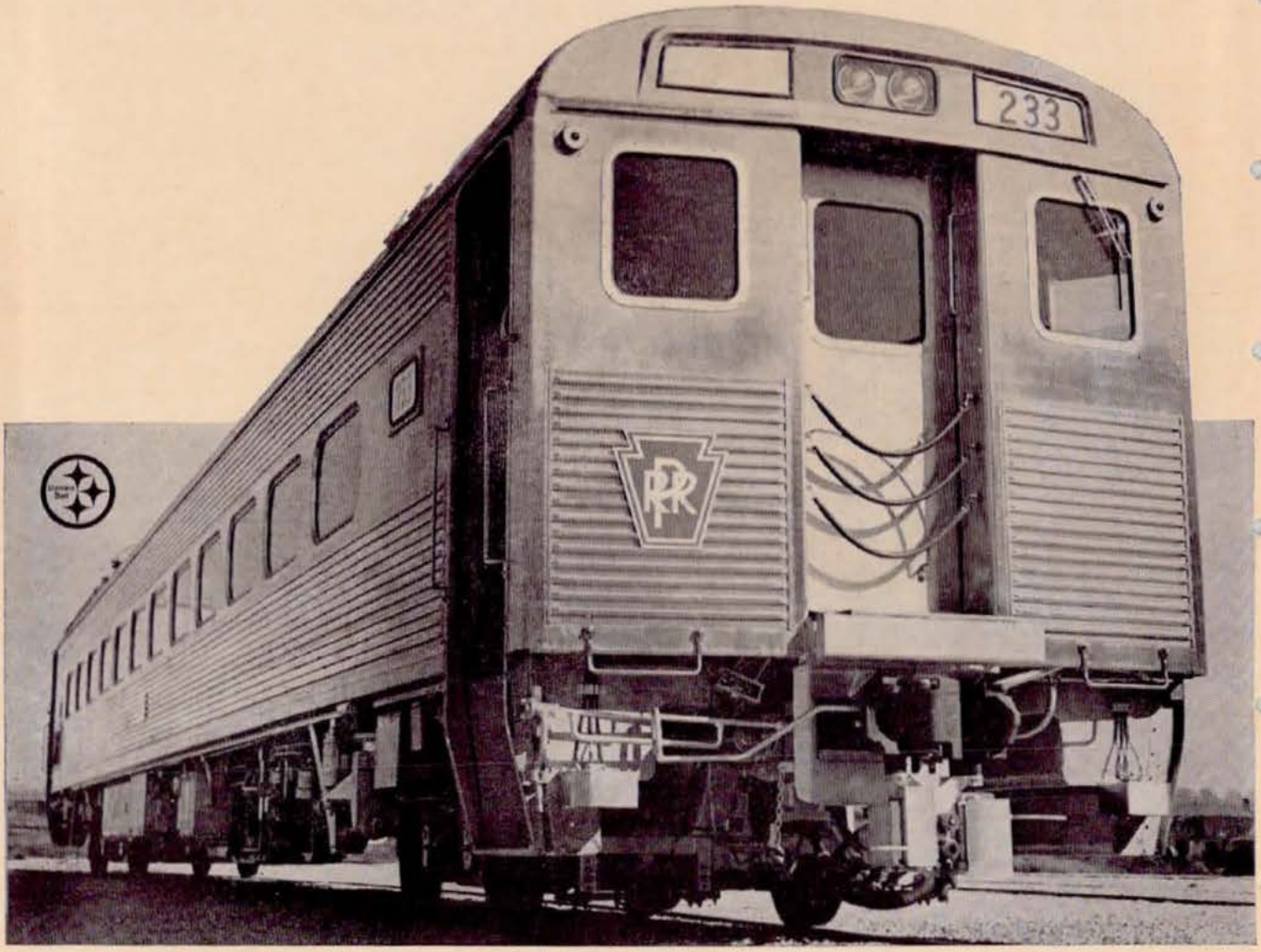

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SHORT AND SIGNIFICANT

7% credit repeal gets narrow House approval

Extension of the surtax—and repeal of the 7% investment tax credit—won House approval last week by a 210-to-205 vote. The bill has moved to the Senate where Finance Committee hearings are expected soon. Russell B. Long (D.-La.), Finance Committee chairman, is known to favor repeal. As the proposal now stands, the 7% repeal would be retroactive to April 18.

5% increase in freight-ton miles predicted

A 5% increase in freight-ton miles for third quarter 1969, as compared with the comparable 1968 period, is predicted by the 13 Regional Shippers Advisory Boards. This is based on an anticipated 2.7% increase in carloadings. Eleven of the 13 boards predict increases. Decreases are seen only by the New England and the Ohio Valley boards. One of the biggest increases is expected in grain loadings, 18.9%. Biggest decrease is foreseen in livestock, 7.8%.

Real estate development program set

Santa Fe is moving to strengthen its approach to real estate development in the commercial and residential fields. The road's industrial development department becomes the real estate and industrial development department, under Vice President George W. Cox, and a new director of commercial real estate has been appointed. Says Cox: In addition to about 22,400 acres of industrial property owned by Santa Fe, "the railroad has thousands of acres along its lines which could be used more advantageously than for industrial purposes." It's the expanded department's job to develop those more advantageous uses.

Strike ends at ACF plant in St. Louis

A six-week strike by five unions against ACF Industries' carbuilding plant in St. Louis finally ended June 24 amid internal union conflicts. The strike, over wages and fringe benefits, officially ended the week of June 16 with ratification of a new labor agreement by a better than 2 to 1 majority of the 1,500 union members involved. However, 21 members of the Firemen and Oilers Union No. 6 and 39 members of the International Brotherhood of Electrical Workers Local No. 1 refused to abide by the new agreement and continued picketing. The Electrical Workers, though, stopped picketing and returned to work on June 18 with the Firemen and Oilers following suit on the night of June 24. Full production resumed the following day.

Westinghouse Electric gets Seattle contract

Seattle - Tacoma Airport is getting its own transit system—a $5.3-million highly automated system to be built by Westinghouse Electric for completion in 1971. The system, two loops and a shuttle, will serve six stations in the airport complex. Nine 106-passenger transit vehicles will be used to take the walking out of air travel. The cars, rubber-tired and electrically powered, will operate in tunnels on a concrete right-of-way, with a center guide beam. Service will be frequent. At times, cars will operate on headway of less than two minutes. During slack periods at night, vehicles will operate on-call, in automatic-elevator fashion.

GE tests PC's new appliance cars

Penn Central's new 60-ft high-cube box cars are being tested from General Electric's Hotpoint manufacturing facilities. The new cars, designed for the appliance industry, can carry more than twice as many appliances as standard 40-ft box cars. Hotpoint's first testing of the new car came in mid-June. One of the cars was loaded with refrigerators, freezers and electric ranges of various sizes and types. It moved from Hotpoint's manufacturing-distribution site in Chicago to Buffalo, N.Y. All appliances arrived damage-free in Buffalo.

MONDAY MORNING REPORT

THE PRESIDENT REPORTS ON TRAFFIC

If you drive your car to work, you're probably familiar with the helicopter reports on traffic common to most big cities. What happens if one morning you look up and see a helicopter displaying the seal of the President of the United States? What happens if he's not just flying on, but flying above you precisely to watch you crawl along the freeway? What happens is that President Nixon issues this pithy traffic report: "I'm glad we don't have to drive to work."

ROAD TRAFFIC MUST BE REDUCED

The statement followed a recent Presidential aerial look at the clogged concrete of the nation's capital. The President was accompanied by John A. Volpe, Transportation Secretary. At a press conference, Volpe said the helicopter ride had confirmed the Administration's belief that a balanced transit system is vital—not only for Washington, D.C., but for all urban areas. "I believe we are going to have to find ways and means of stopping the increasing volume, of some 5 to 6% (annual growth), of automobile or tire traffic into our major cities," Volpe said.

A BILL IS BEING PREPARED

The reduction in road traffic would come about through an increase—apparently much more than five or six percent—in the amount of Federal spending for other forms of urban transit. The President plans, Volpe said, to submit to Congress a bill that would "substantially" increase the amount of money available for public transportation. "At the present time, the Federal Government spends as much in six weeks on highway transportation as we have spent in the last six years on public transportation. This needs to be brought more in balance, and we are very hopeful this bill which the President will submit will help do that," Volpe said.

CAPITAL GRANTS, NOT OPERATING SUBSIDIES

What kind of program would the bill provide? Volpe is explicit. The provisions would be for capital construction grants. "We don't envision the Federal Government participating in providing operating subsidies," he adds. The bill would be "for the construction, primarily, of rapid transit systems or for bus systems . . ." The tracked, air-cushioned vehicle might be included, too, Volpe said. When will the Nixon bill go to the Hill? At the press conference, Volpe said "within two weeks." That would have made it July 8, roughly. But a DOT spokesman later altered that statement. He said "at the earliest possible date" would be better wording.

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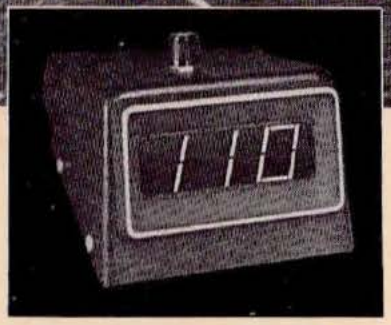

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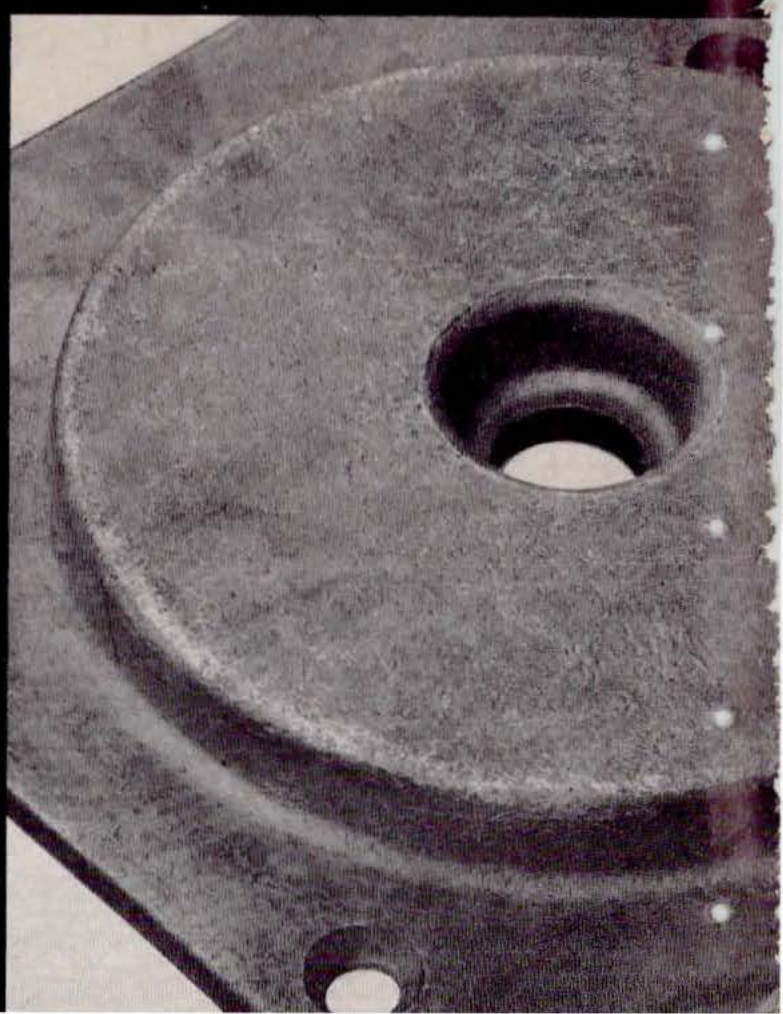

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RAILWAY AGE
THE TRANSPORTATION WEEKLY
JULY 7, 1969

St. Louis maps billion-dollar plan for transit

A mass transit proposal carrying a price tag of more than $1 billion was ready for unveiling in St. Louis last week. The proposal, part of an engineering study made for the East-West Gateway Coordinating Council, suggests two principal routes to improved transit. One is expansion of the present bus system. The second contemplates construction of exclusive transit rights of way, either for buses or for rail vehicles. According to the St. Louis Globe-Democrat, the busway system would cost around $1.3 billion, and the rail system around $2 billion. The Globe-Democrat has taken a strong editorial stand in favor of rails, asserting: "Despite its initial higher costs a rail rapid transit system seems the logical answer to handling transportation needs of the future. People are going to get what they are willing to pay for—either more and more congestion on the streets and highways or smooth-flowing public transportation."

Meanwhile, the Chamber of Commerce of Metropolitan St. Louis has named a Mass Transit Committee to drum up community support for the project. Chairman of the committee is Eugene F. Williams, Jr., president of the St. Louis Union Trust Co. Co-chairman is Frederic M. Peirce, board chairman of the General American Life Insurance Co.

WEEK AT A GLANCE

DOT announces transit grants for two cities

The Massachusetts Bay Transportation Authority and the Cleveland Transit System were the recipients last week of $59,682,066 in grant from the DOT Urban Mass Transportation Administration. The MBTA's grant of $50,862,000 is the largest ever made by the UMTA. It will help complete a five-mile extension north of Boston that will take it to the Malden-Melrose city line, serving those two cities as well as Medford. The grant will also assist in the completion of a Charles River tunnel.

The $8,840,066 grant made to the CTS will be used mainly for improvements in its present system. As part of a $13.2 million project, the grant will aid in the purchase of 100 new buses and a new central shop facility for them and ten new airport transit cars.

Freight-car pools: An old idea that needs a new look?

With a few special-situation exceptions, railroads have traditionally backed away from proposals to set up broad freight-car pools. But Frisco President Richard C. Grayson thinks it's time the industry took another look at the advantages which pooling might bring, especially in the area of plain-box equipment. It may be, Grayson told the AAR Mechanical Division last week, that the "long-standing reluctance to accept the idea of a car pool of general-purpose equipment, is at least in need of reconsideration." Periods of equipment need vary from territory to territory, and from road to road, Grayson noted, and a pooling arrangement "would permit a sharing of equipment, much the same as we share flat cars for piggyback traffic and for the movement of new automobiles and trucks." Car-fleet figures back up his concern: Since 1960, ownership of special box cars has almost tripled, ownership of covered hoppers has almost doubled—but the plain-box fleet has declined by about 38%, and "there is within our industry a pronounced shortage of general-service equipment, both 40- and 50-ft cars."

Interest in some form of car pool ran high about a decade ago, but in recent years the idea has seldom been raised. Past studies involved two proposals—one, the so-called Symes Plan, involved government acquisition of equipment for rail use; the other, known as the Realco Plan, would have been a privately-operated venture.

GUS WELTY

LINES ON LABOR

IF A FELLOW BELIEVED everything he read, he'd spend half his life hiding under the bed. For instance, take the current publicity campaign being waged by (or on behalf of) the campus-radical establishment. There is, so it's said, a great plan afoot—to move the protest movement from the halls of ivy to the halls of commerce this summer. The hairy ones, so it's said, are going to shave, borrow a clean shirt, trade their sandals for shoes and infiltrate industry—where they will then proceed to preach the new gospels.

RAILROADS HAVE NOT been mentioned as a primary target of the "movement." But it's reasonable to suppose that railroads would be somewhere on the list. Railroads are an essential industry, national in scope. Railroads do hire a lot of college kids for summer work.

THERE IS A GOOD CHANCE, of course, that the student activists have absolutely no intention of trying to disrupt industry. Their well-publicized "plan" could be a put-on—just another attempt to scare up an over-reaction. There's also a possibility that the most active of the activists may be too busy fighting each other to take on any new worlds for conquest. S.D.S., for instance, recently held a national convention in Chicago. Their first move was one of incredible naivete: They tried to charge the press admission. Anybody who has dealt much with press-types knows that paying admission violates several basic principles of the profession, some of which have to do with freedom of the press. Then, not content with this, S.D.S. proceeded to exercise a right which one commentator called the right of every radical group: They split into factions.

IN ANY EVENT, should the campus-unresters still harbor thoughts of working on the railroad, a little advice might come in handy. For one thing, railroad employees tend to be a conservative lot, with basic and rather strong loyalties. A campus refugee out preaching revolution in the shops or in the yards might just get a wrench laid alongside his skull. (The newspaper *Labor* put it in more genteel terms, in reporting on a recent RLEA discussion: Radicals, *Labor* says, will get "a far cooler welcome than they've received on the nation's college campuses during the past year.") Then there's another point which is even more basic: In many, many cases, summer work on a railroad is hot, dirty, sweaty—in other words, hard work. It's good work for aspiring football players. But, as one longtime railroader sums it all up, "There are very few theorists on our weed gangs. Do you think they'd be happy there?"

Task force drafts eight-point plan for rail safety

The railroad safety task force appointed by Transportation Secretary John A. Volpe came through on schedule last week—with an eight-point program including broad federal regulatory power and a permanent public-management-labor advisory body.

Railroad safety has reached the point where "effective steps must be taken to bring the problem under control," and solutions short of wide government regulation may fail to solve the problem, the task force said.

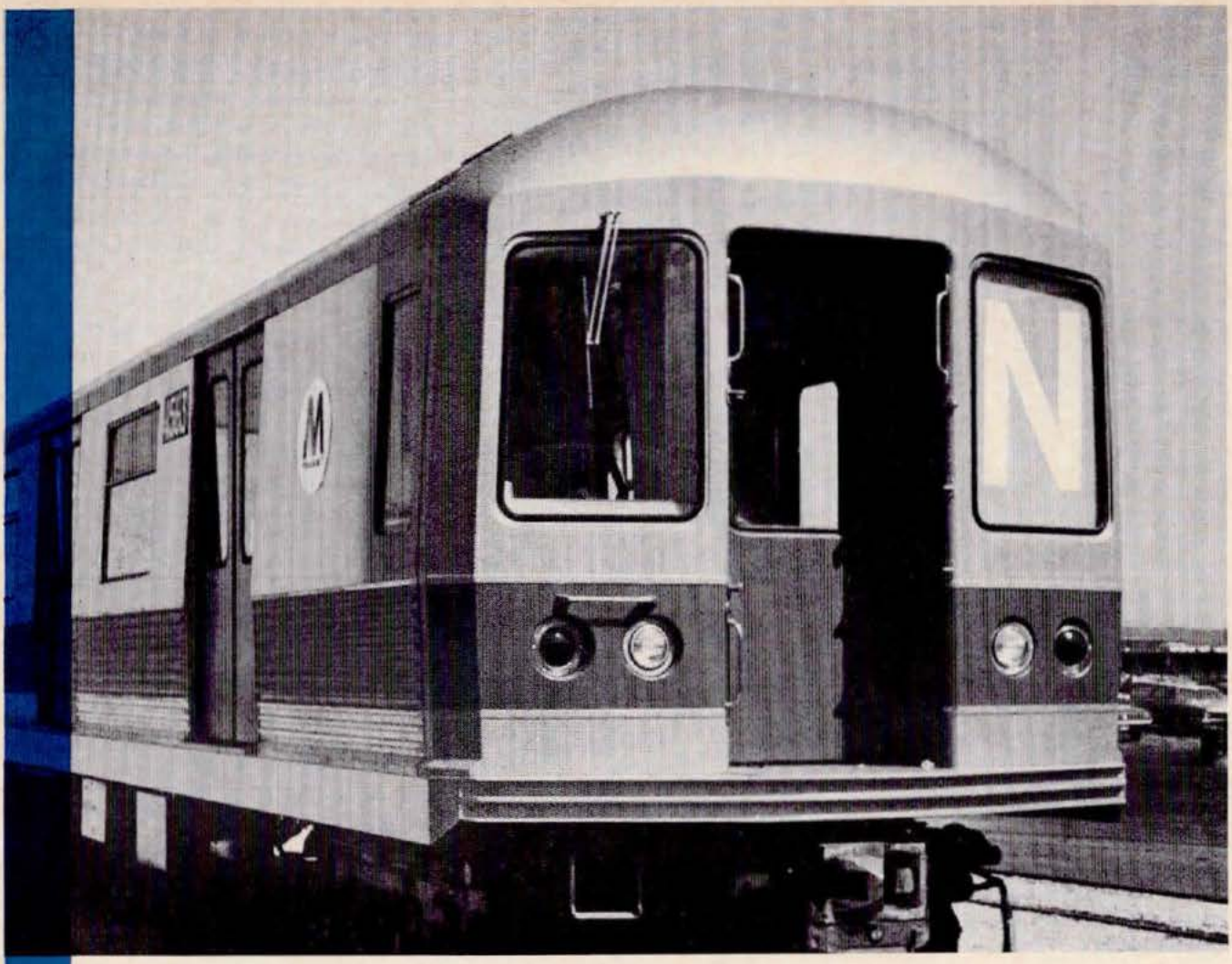
Consequently, the Secretary should draft legislation to implement the eight proposals, in consultation with the task force and with the appropriate Congressional committees, the report went on to say.

Under the chairmanship of Reginald N. Whitman, Federal Railroad Administrator, the state-labor-management group recommended first that the Secretary (through FRA) should have power to "promulgate reasonable and necessary rules . . . establishing safety standards in all areas of railroad safety."

Secondly, it was proposed that a national railroad safety advisory committee be set up, with representation like that of the task force. Mainly, this body would be a sounding-board for the Secretary's proposals, but it could make its own suggestions, too.

The general causes of train accidents, the group concluded, "are almost evenly divided among human error, defects in or failure of equipment, and defects in or improper maintenance of track and roadbed"—areas not generally covered by existing federal and state laws.

The task force also recommended that: uniform procedures and standards be pursued for grade crossing safety; formal employee training be expanded to insure compliance with safe operating practices and to reduce the "impact of human error"; FRA revise its rules for accident reporting; the advisory committee study the present delegation of authority to the AAR explosives bureau "in certain areas of the Transportation of Explosives and Other Dangerous Articles Act"; government and the industry start research into safety technology, to be funded immediately for three years, "over and above existing research programs; and that a federal-state partnership exist for administering rail safety, with state laws to stay in force unless pre-empted by federal regulations."



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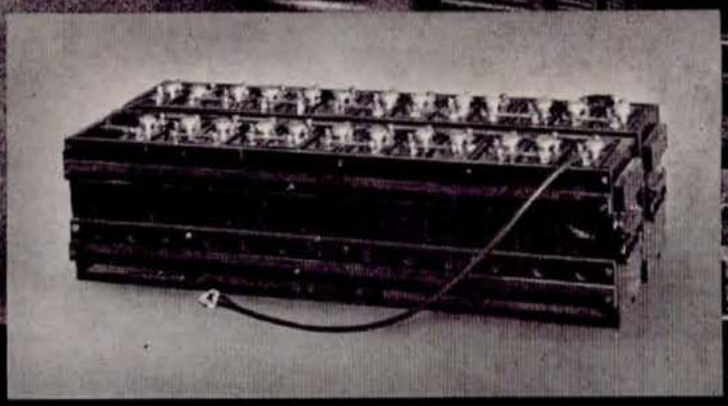

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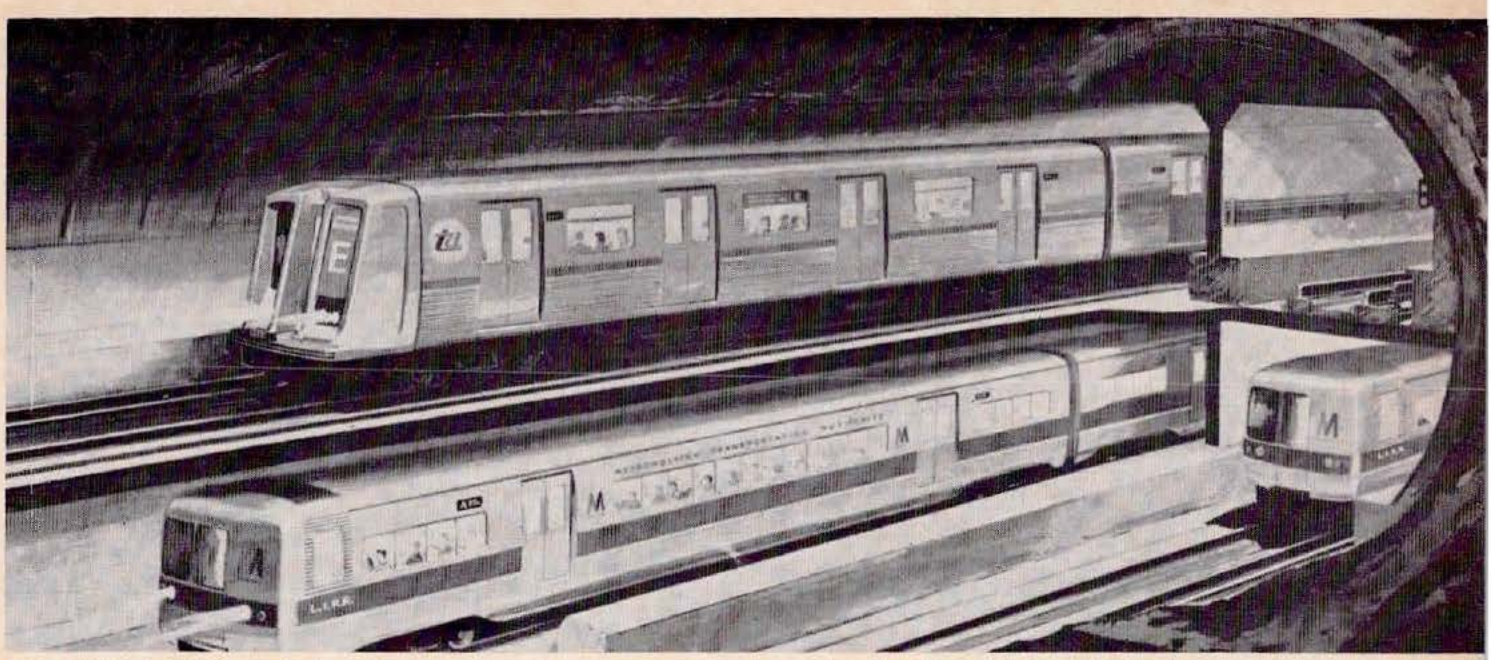


EAST RIVER TUNNEL might be built conventionally, as shown above, or sunk in trenches, like the BART system.

New York Transit to begin expansion

MTA outlines huge program, hails it as the largest ever.

By PHILIP HARRISON, Associate Editor

New York is a city of superlatives, not the least of which is its subway system—one of the world's longest, busiest and most crowded. The system's trains carried over 4,000,000 passengers across 237 route-miles of track through 135 miles of tunnels to 484 stations daily in 1968.

New York State recently appropriated $600,000,000 for the city's Metropolitan Transportation Authority from a $2.5-billion transportation bond issue approved by voters in November 1967. This insures implementation of a $1.6-billion rapid transit expansion program in New York City. The initial program, designated Phase I of a $2.9-billion, two-phase expansion, represents the largest undertaking of its kind by any city at any single time. MTA spokesmen hope that groundbreaking will begin next autumn.

● **New tunnel.** The long-discussed 63rd St. tunnel, to go under the East River from Manhattan to Queens, won final approval from the city Board of Estimate last month. Estimated to cost $75,00,000, the 3,140-ft-long tunnel is viewed as the vital link in MTA's broad plan. Almost every project of the Phase I program connects with it in some way.

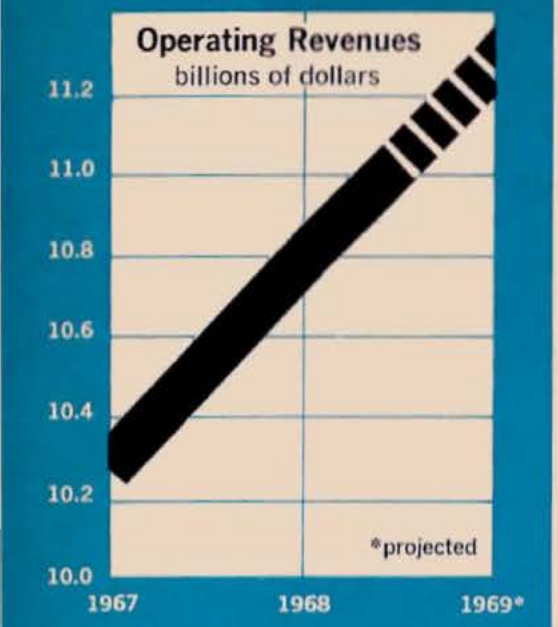
The two-level tunnel, with two tracks on each level, will accommodate both subway and Long Island Rail Road cars. It will permit extension of the LIRR's main line in Sunnyside, Queens, and of the Queens Boulevard subway, through the tunnel under 63rd St. and south down Third Avenue to the huge Metropolitan Transportation Center at 48th St. (The Transportation Center is still in the planning stage.) Interconnected with the tunnel will be a new 63rd St. crosstown subway, which will also connect with the Seventh and Sixth Avenue lines.

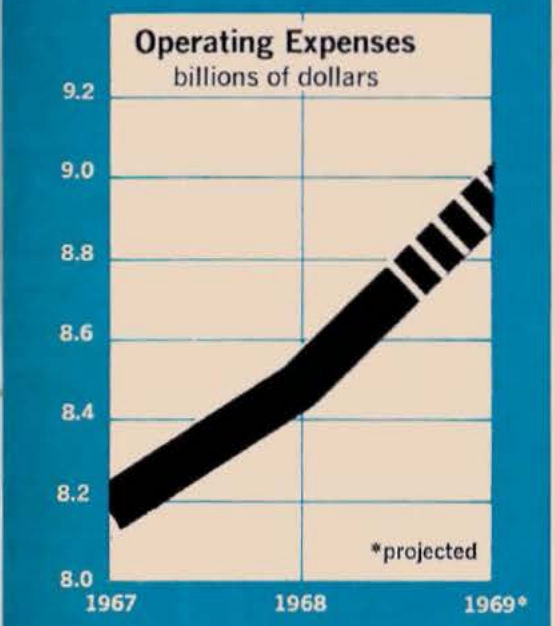
Bids went out for the tunnel on June 16. Prospective builders have until the middle of August to submit their proposals. They have been asked to submit bids based on two different methods of construction. One calls for a 39-ft-diameter concrete-lined, cast iron tunnel driven underground by conventional compressed air methods. The other calls for a 38-ft-square concrete tube to be sunk in trenches, like the one used for the BART system in San Francisco. The tube would be sunk in the east and west channel beds of the East River, with underground sections in Manhattan, Queens and below Welfare Island. Both methods of tunnel building have been used previously in constructing New York subways.

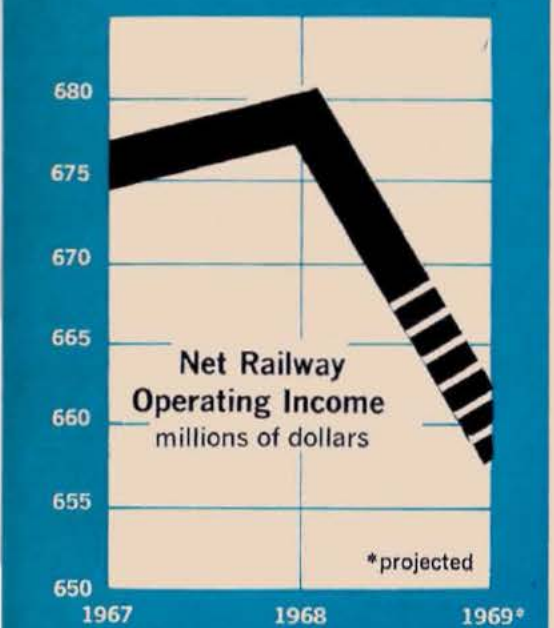
● **JFK-NYC rail links.** Close to $500,000,000 of subway construction is planned for Queens. Included is a high-speed express track expected to double rush-hour capacity. Also included are new and modernized rail lines to provide direct LIRR service to Kennedy Airport, from both Penn Station on the west side and the new transportation center on the east side. MTA spokesmen say travel time from Kennedy to Manhattan will be only 20 minutes with, initially, two-car trains leaving every 10 minutes.

● **2nd Ave. subway.** Though creation of a Second Avenue subway has received final approval, the Board of Estimate has withheld approval of the route below 34th St., pending further hearings on July 24 on moving that portion of the line further east. The

(Continued on page 39)







MID-YEAR REPORT:

The year has so far produced more questions than answers, especially insofar as labor matters are concerned. As for traffic and revenues, both are headed upward—but slightly.

By GUS WELTY, Senior Editor

For the dollar values and the morale values, railroads could use a sensational year in 1969. The odds are now that they're not going to get it.

Golden Spike Centennial year won't be a bad year, as such things go in the railroad industry. But it won't be a whopping good year either.

● **Many questions, few answers.** As usual, complicating factors are in ample supply.

—What kind of settlement will the shopcraft unions eventually pry loose from the industry, with or without government intervention? How much will it cost? Will it be turned into any kind of pattern for other settlements?

—How much will the operating unions and the other non-ops demand, when they're free to do so after Sept. 1? No increases can become effective before next Jan. 1, but a series of unreasonable demands could still throw a cloud over operations late this year.

—What further action, if any, will be taken on the broad question of freight rates and charges?

—What final resolution will come out of Congress and the Administration on the 7% investment tax credit

—What reaction, if any, will the economy show toward the beginning pullback in Southeast Asia?

—Will Administration actions put a hoped-for brake on inflation by early autumn, or will the spiral continue despite government manipulation as it has in the past?

—What sort of mood will Congress be in as it considers such specific rail-oriented proposals as those involving safety, hours-of-service, supplemental pensions?

—Can some final settlement be made on the fireman-manning dispute, or will there be a re-run of the bitter controversy of the early 1960s? And is there any prospect of working out the broad isues of train-crew consist in a way that will offer acceptable new opportunities to both the industry and its employees?

● **What can be said for '69?** The predicting business has seldom been so fraught with peril, seen and unseen. Still, there are a few forecasts that might be made, over in the area of more tangible things. And when industry observers look at facts for first-half 1969 and try to project for the July-December period, they come up with a picture that looks something like this:

—Freight traffic, thus far, has been running about even with last year's volumes. Carloadings are down a bit, ton-miles are up a bit. For the full year, the best guess now is that loadings will equal 1968's 28.2 million and that ton-miles will show an increase in the 2%-to-3% range.

—Revenues will likely show a somewhat higher percentage increase. For first-half '69, the gain will be about 5%. But, because of the timing of last year's freight-rate increases (effective June 24 and Nov. 28), second-half gains will be measured against a different set of base circumstances. The present estimate is that revenues for 12 months of 1969 will be up by about 4%.

—Whatever increase in revenues there is, increases in operating costs can be expected to absorb it. One big expense item falling due: Wage increases for most union employees which became effective July 1 as the final boost negotiated during the last round of contract demands.

THE SHAPE OF '69

—Net income has a fighting chance of equaling last year's. But it's going to be a struggle. The outlook is that net will fall somewhat below the $593 million reported for 1968. Rate-of-return probably won't vary much from the 2.4% of last year.

—Capital spending for improvements will probably buck the downtrends and show a substantial percentage increase. The AAR-reported figure for 1968 was $1.2 billion; observers think it likely that '69 will see spending of about $1.4 billion, to which should be added another half-billion dollars in expenditures by what might be called the private sector of the railroad business.

● **Knowns and unknowns.** The year, even thus far, has not been an easy one for businessmen to gauge. For the first time since 1961, a different party has control of at least one branch of government in Washington. For the first time since 1965, the trend of involvement in Southeast Asia appears to be downward. For the first time in quite a while, there has been talk of wage/price controls (though this was quickly and rather firmly quashed).

Balanced against these "first times," however, are a number of "as usuals."

As usual, prices continue to rise. As usual, neither wage demands nor wage settlements show any sign of a cutback. As usual, the squeeze is on, in transportation. And it's difficult to see how either of the dominant modes—rail and truck—can make-do without finding new sources of revenue or tapping the old ones harder.

Final figures won't be in on second-quarter 1969 for some weeks. But the reports are available for first-quarter—and they indicate the magnitude of the job facing the railroad industry if '69 is to be pulled up to the levels of '68.

Taken alone, the revenue figures don't look bad—freight revenues up 5.6%, total operating revenues up 4.9%. But then there was a 4.6% boost in operating expenses. There were increases in tax accruals and rents. Net railway operating income hit a six-year low, at $142 million. Ordinary income—net before extraordinary and prior-period items—dropped from $112 million last year to $97 million.

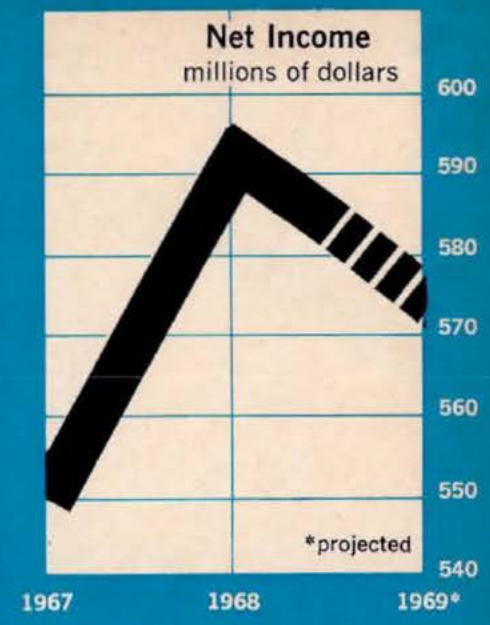
More than one-third of the nation's Class I roads—25 out of 74—showed first-quarter deficits. Western District roads accounted for almost two-thirds of the total industry net, $62 million. But that figure was down from $80 million in 1968. Southern District roads showed an increase, from $27 million last year to $33 million. And Eastern District roads were again hard-hit: Fourteen of them posted deficits—and the district as a whole barely missed a loss, with ordinary income totaling only $2 million.

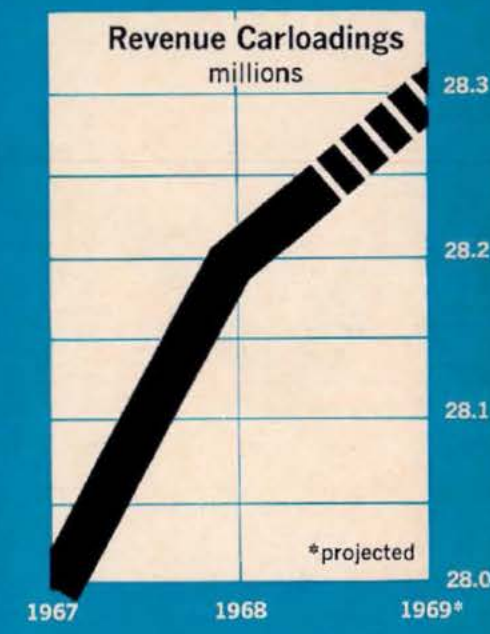
● **A booming business, but . . .** All this comes at a time when transportation—by most measurements—is doing more business than ever before. About 20% of a rising Gross National Product is accounted for, directly or indirectly, by one variety of transportation or another. By one estimate, intercity freight transportation (by all modes) was a 2-trillion-ton-mile business last year, the first time it has reached that figure. Yet those in the transportation business—railroads and others as well—have an annual battle with the balance sheet to do better than break-even.

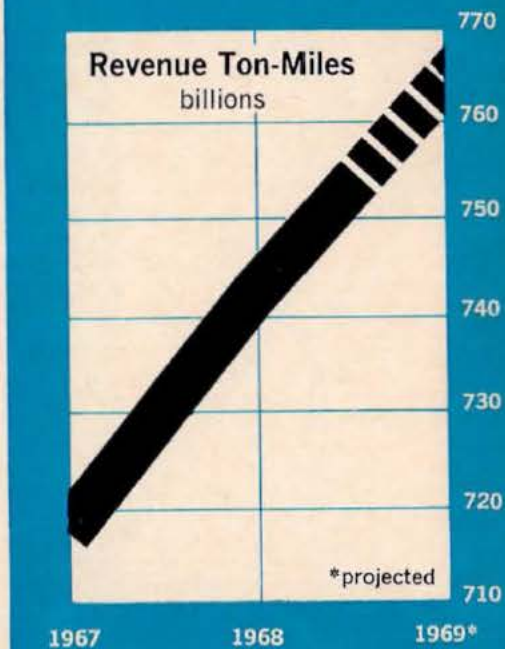
Inevitably, the railroad story will be keyed to what does and does not happen in the broad area of management-labor relations. It can't be otherwise in an industry where (1) well over half of every incoming dollar is paid out in wages and benefits, and (2) contract restrictions often make operational change either impossible or highly expensive.

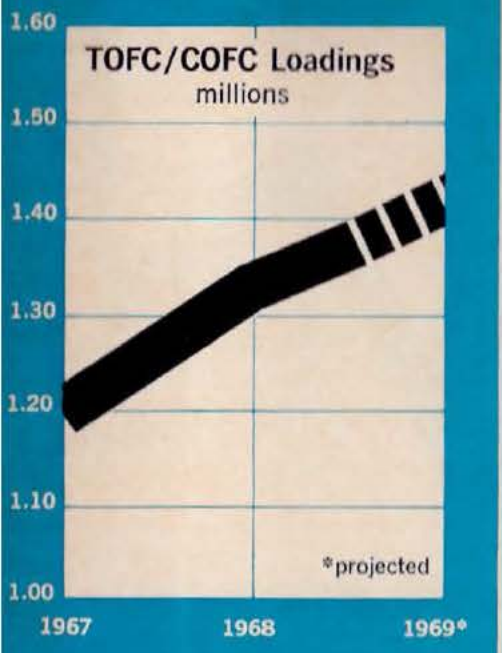
● **Demands are building up.** On the direct-cost front—the wage-benefit front—the signs are not overly encouraging.

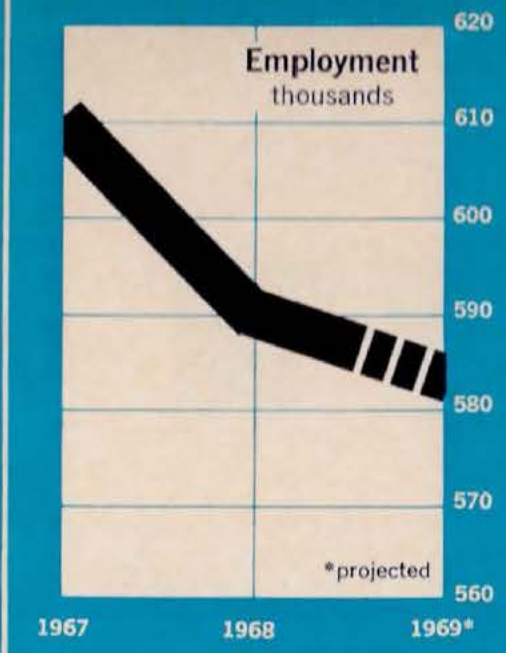
The only active case now involves the shopcrafts, in with a pair of notices and in mediation on both. But as of Sept. 1, the remaining organizations—those covered by the current long-term

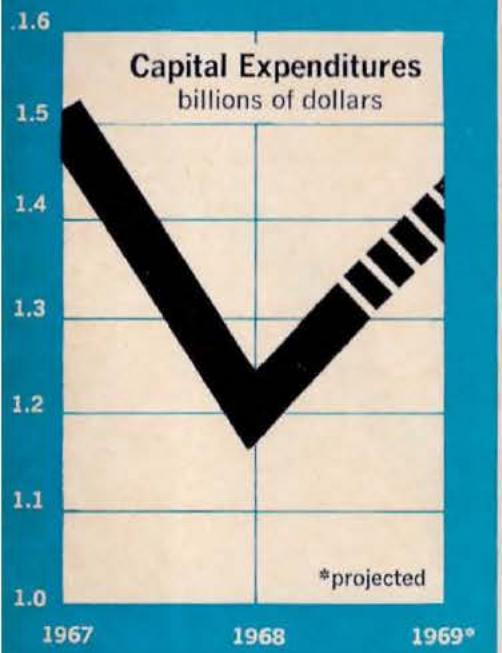


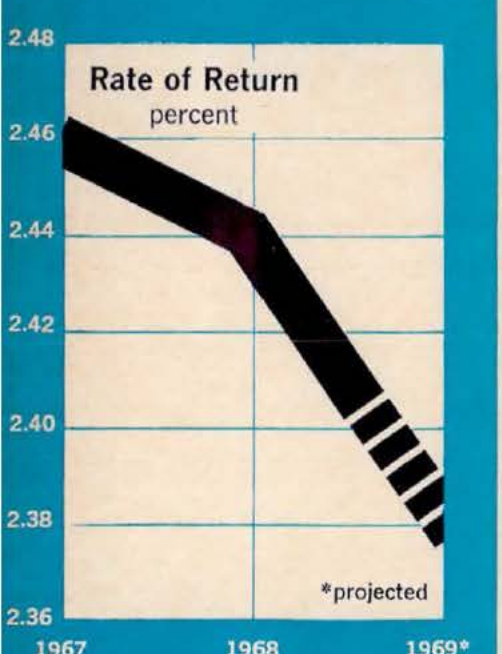












MONEY PROBLEMS

agreements with a Jan. 1, 1970, moratorium on contract changes—will be filling labor-relations offices with Section 6 paper. Despite the depressed state of earnings in the industry, the demands are not likely to be moderate.

For one reason or another the Brotherhood of Railway and Airline Clerks chose not to wait until September to make its program known. And BRAC is not being bashful: Its demand-package includes 12% wage increases each year for three years, along with an impressive—and lengthy—list of improvements in benefits. The price tag, by the union's own reckoning: More than $500 million, in the three-year period beginning next Jan. 1.

If the BRAC estimate is accurate, and if the rest of rail labor were to come in with similar demands, the cost of meeting them could run to $1.25 billion, maybe higher. (BRAC officers have indicated that at least two other organizations will probably join in the demands, and that together the three unions represent more than 50% of rail employees.)

● **Again, work-rule problems.** No less important—for both the short and the long range—will be upcoming developments in the continuing story of work-rules and how they can be modernized.

Management people have made pointed reference on a number of occasions to the need for developing new kinds of service more closely tuned to the needs of the transportation buyer. Marketing people don't lack for ideas on the scope of these new services. The problem is that, almost without exception, the boldest of these ideas prove to be uneconomic if they are mere overlays on existing operations.

Still, traffic and revenue projections indicate that with an economic operation, railroads could regain a significant amount of business that now moves by other forms of transportation. In effect, operating unions are being asked to trade-off long-cherished rules in return for creation of better jobs and perhaps more jobs as traffic comes back to the rails.

● **What decision for labor?** Some top union people give the impression that they want to be convinced that

COULD BE EASED BY SOME LABOR BREAKTHROUGHS

this is a right course to take. As of now, however, they are either (1) unconvinced, or (2) unsure of how to sell such a program to the membership and to local brotherhood leadership.

Ironically, the technology of which railroads are so proud may have had a dulling effect, where work-rule changes are concerned. Union people have seen railroads recapture the new-automobile business with the rack car. They have seen unit-train technology solidify both the market position of coal and the railroads' position as coal haulers. They have seen the growth of piggyback and they are watching the development of containerization.

Just possibly, union people have come to believe that technology will solve wnatever problems railroads have —and that technology alone can do the job. Rail management knows this isn't so—but it has not yet been able to put across the concept of total marketing in a way that labor's leaders choose to (or can afford to) accept.

● **Progress—possibly.** Still, there is a possibility—some would even call it a good one—that late '69 or early 1970 will see some form of breakthrough with the operating crafts. Several major roads, for instance, have been talking new-concept train operation with the United Transportation Union. UTU's top officers have been receptive—though they are inclined to back off from any kind of proposal which would involve sudden and drastic changes in manning requirements. They're also wary of any plan which is not plainly labeled "experimental."

Perhaps, however, UTU—as well as rail managements and the shipping community—will get a clearer picture of what can be done, when Illinois Central and Swift & Co. complete their evaluations of a mini-train test which ended last week.

Lacking an agreement with the union on manning, IC was forced to run the five-car, short-haul trains with "standard" crews, and it was required to observe seniority-district and road-and-yard barriers. Under these circumstances, observers say it would be a miracle if mini-train proved economic —but the two-week test will provide, at the very least, facts and figures on which judgments and decisions can later be based.

Labor does present one of the toughest problems facing the industry, but at the same time it presents a problem that can be grappled with directly. No such direct confrontation is possible when railroad men start worrying about economics generally, and the effects of economic change on the industry.

● **A year without a pattern.** It's even difficult, this year, to make meaningful comparisons with year-before results. In 1968, traffic during the first half was artificially inflated as steel users stockpiled in anticipation of labor troubles in the basic steel industry. Traffic during the second half suffered somewhat as a result. Traffic in 1969 hasn't been affected by such special circumstances—and that's one factor in the current projections calling for a 1.5% ton-mile increase in first-half '69 and a 2%-to-3% increase for the year.

Even this modest-increase forecast, however, is hedged with a reminder that nobody knows now the effects of the Administration's attempts to cool off the economy. The President has said he expects some sign of results to begin showing in a few months. There are indications that more drastic moves may be made if a cool-off does not come. At the same time, the economy will have to make its own assessment of the Vietnam situation—whether the initial recall of forces is the start of a full-scale move to disengage, and then whether that disengagement will be a fast or slow process.

About the only safe economic forecast at this point is that whatever happens, it will not happen alike to all roads, or even to all roads operating in a given territory.

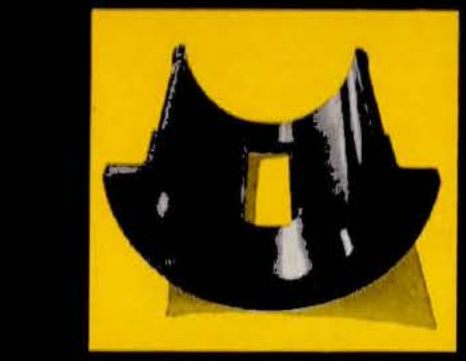
One territorial study, for example, yields up just about every conceivable result. There was one carrier which showed a better-than-average percentage increase in revenues and a smaller percentage increase in expense—and its net income dropped sharply. There was another carrier which posted a revenue increase of more than 10%, but expenses were up also by better than 10%—and its net income showed a modest increase. And there was a third road which coupled a relatively smaller revenue increase with almost no percentage jump in expenses—and its net income went into a steep climb.

These comparisons may or may not be meaningful. They do tend to confirm one description of the times: 1969, the patternless year.

● **In Washington: Help coming?** Even in the political arena—where things are sometimes more cut-and-dried—there is a kind of non-pattern. With the year half gone, very little of a positive nature has happened—and it remains to be seen whether the industry will be able to make progress toward a set of goals which includes common-ownership legislation and aid for must-run passenger trains. On the negative side, not much more has actually happened—but again the industry is being forced to devote a disproportionate share of its energies to self-defense. And again—in such areas as safety and passenger service—various elements in government seem to be trying to prove that there is still political mileage to be won by kicking the railroad industry.

In this formless, patternless year, though, a few positive points stand out. One is that railroads have never been in better shape, technologically. Another is that railroads are devoting an increasing amount of effort to developing not just efficiency in the product but saleability of the product. A third is that dialog continues between rail management and rail labor's leaders, and as some wise man once said, "Even reasonable men can't settle their problems if they don't talk with each other."

● **Summing up and looking ahead.** So, the outlook—at mid-point in 1969 —can be stated simply, if not specifically: Railroads will do more business and take in more money this year, though they may not be able to retain as many dollars as they did in '68. Their participation in the transportation market is not likely to move much, either up or down. And in the areas of dealing with two vital "publics"—labor and government—may lie the determination as to whether railroad men will look back on '69 as a good year, a bad year, or a non-year. ■



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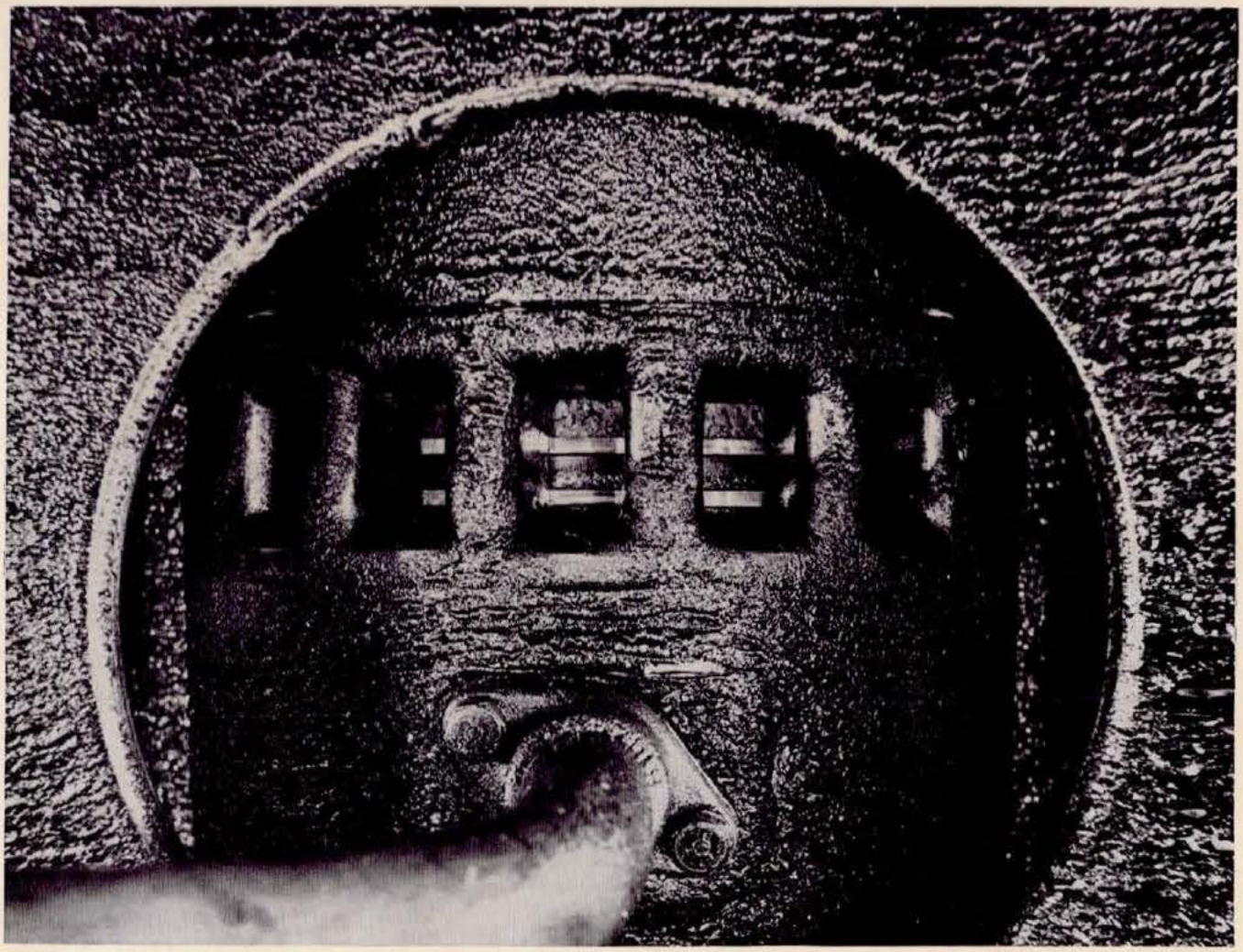

You're looking through the No. 3 cylinder air box inspection covers of identical EMD SD-40 engines in comparable service on the Western Maryland Railroad. Photo above, left, shows engine condition after 93,847 miles since factory delivery on the most widely used conventional oil. Photo above, right, shows condition after 94,360 miles since factory delivery on high-dispersant Shell TORNUS® Oil. Look at the difference.

But there's more to high-dispersant oils than cleanliness, according to Western Maryland authorities.

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"We've got over 40 critical units on Tornus Oil," explains a spokesman. "Including the newest and the oldest, all in drag freight.

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"We've eliminated engine failure caused by water."

"Water leakage used to mean one thing—drop the bearing caps and inspect for damage. Likely as not, we were faced with a major overhaul.

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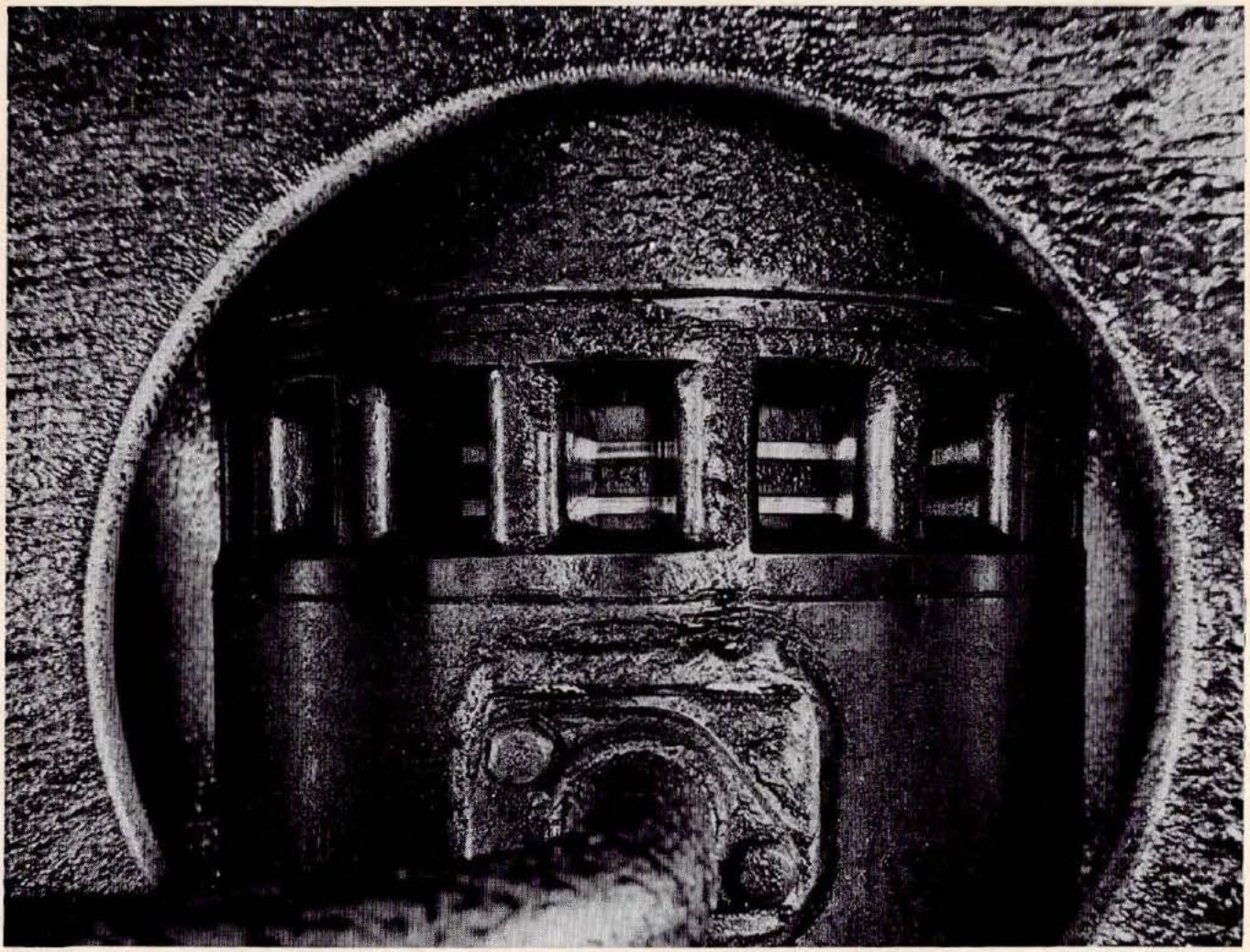

"We found that high-dispersant oil can swallow water. It may become so loaded with water, the oil looks like milk, but we don't have to drop the bearing caps.

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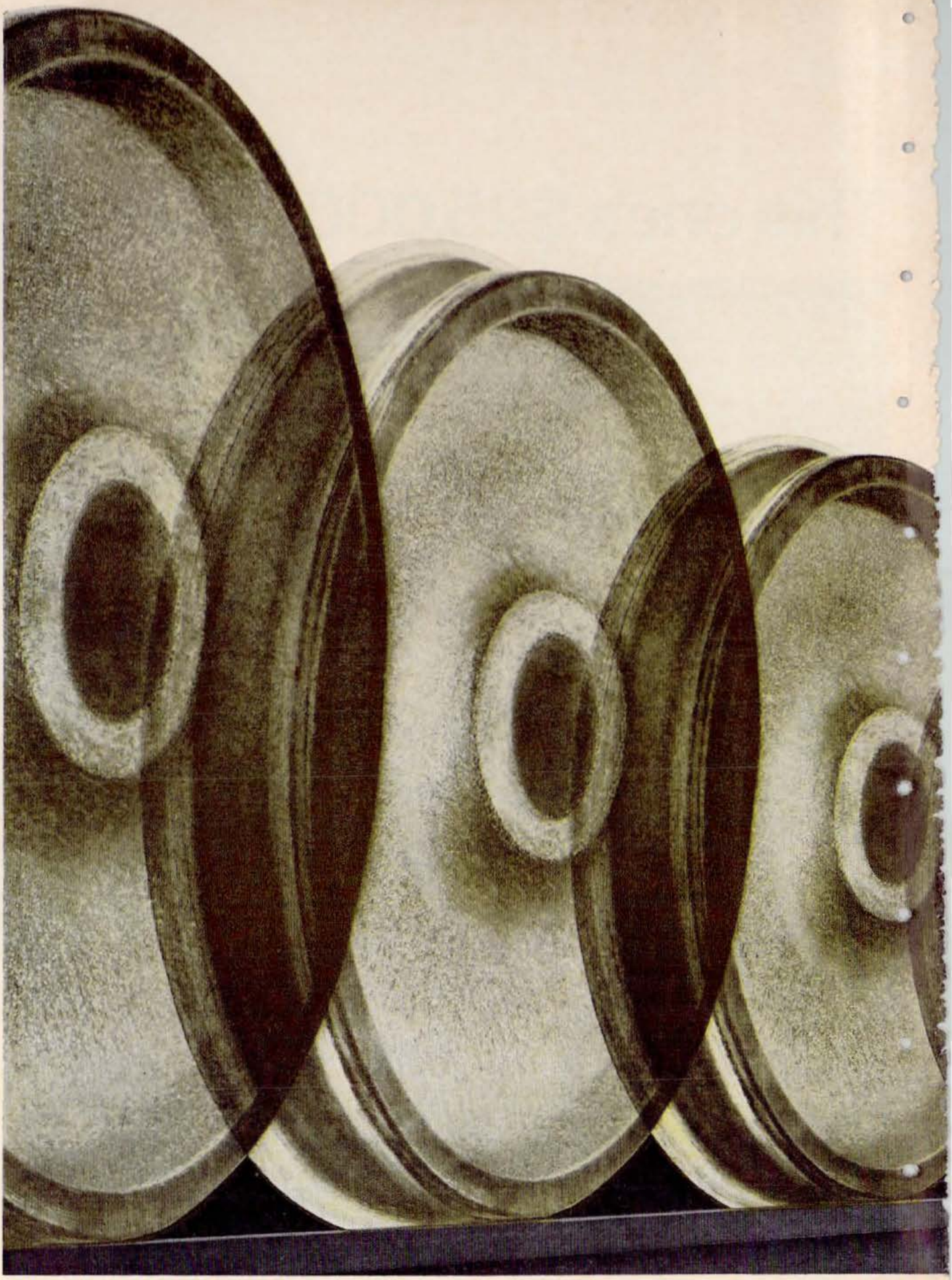

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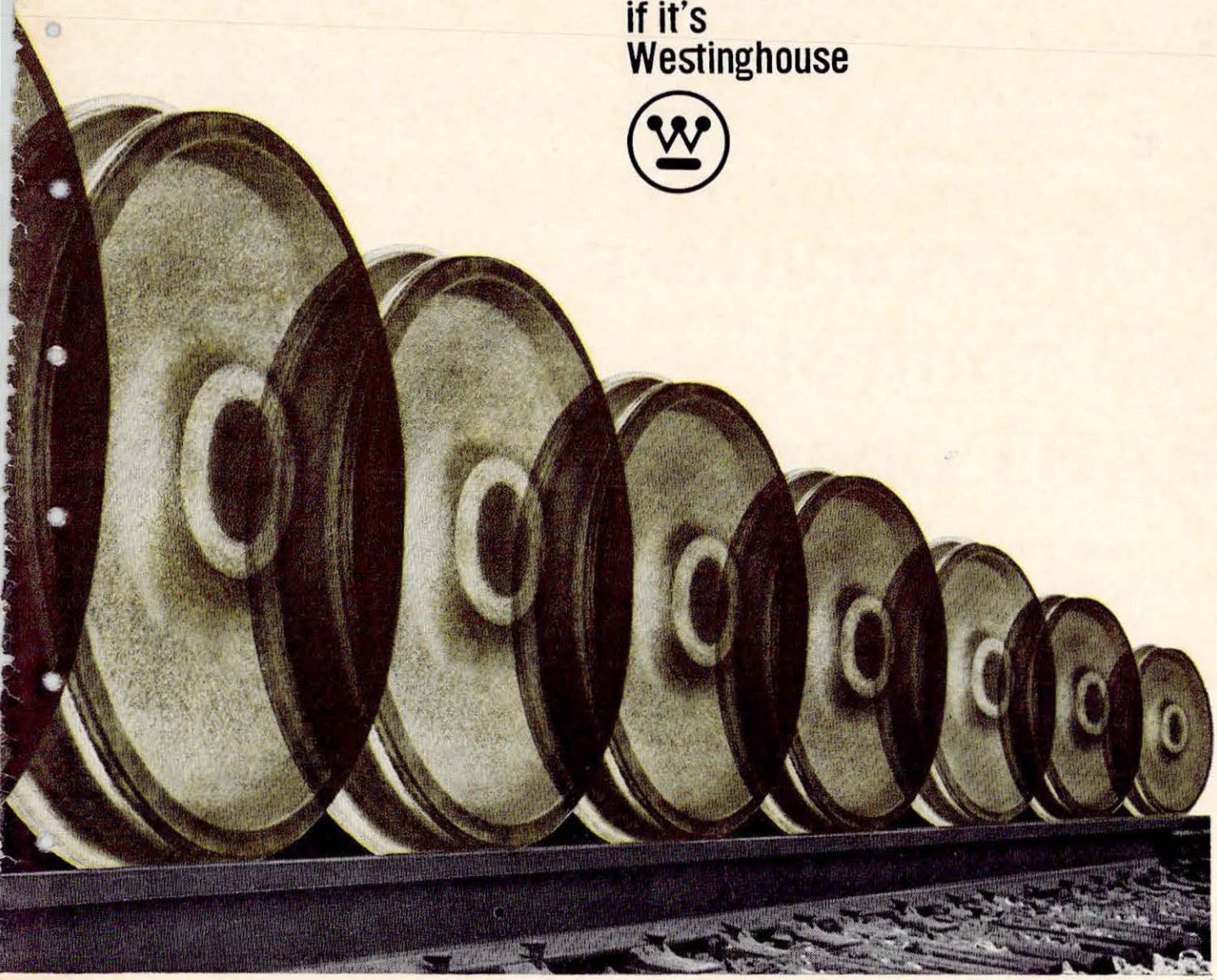

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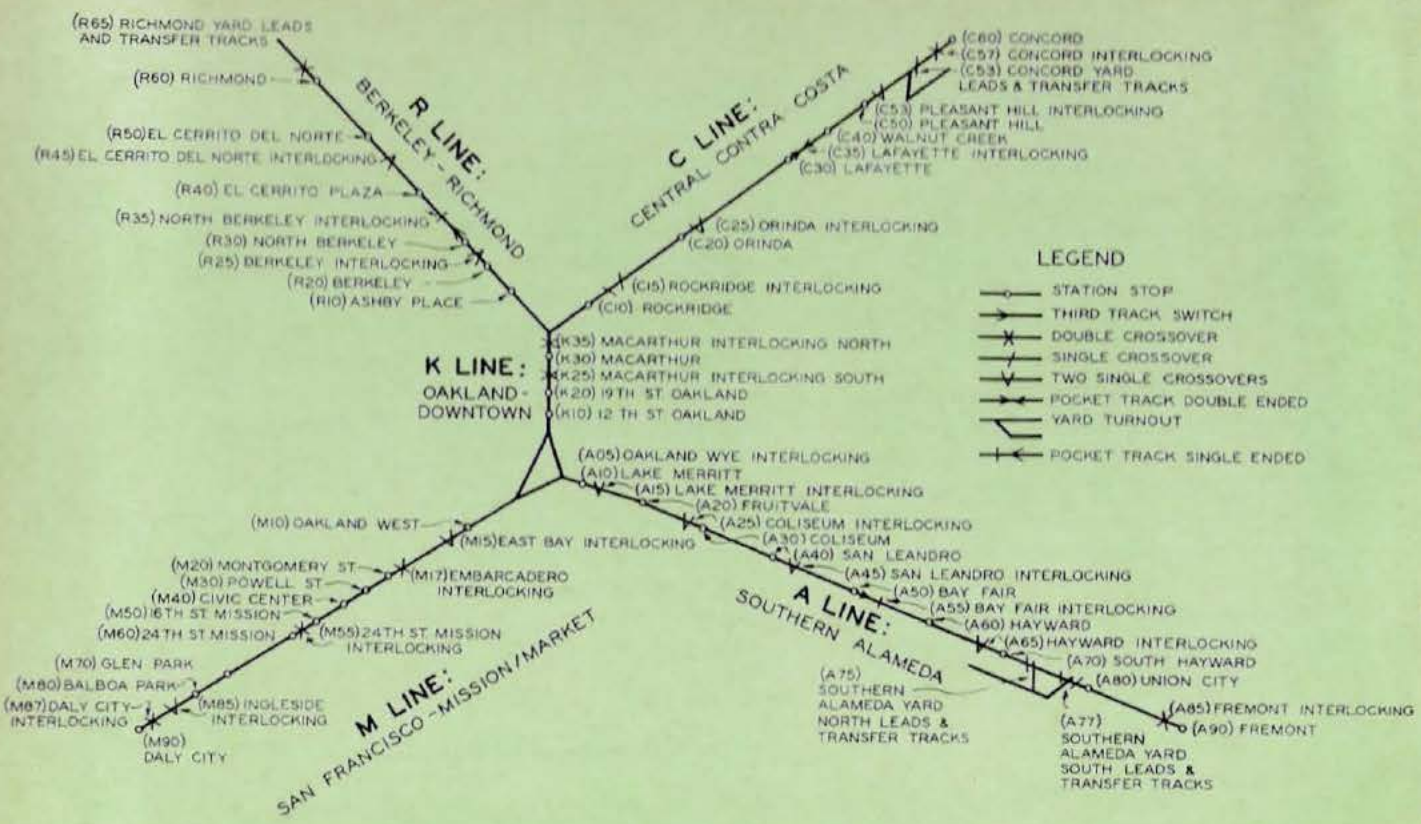

BAY AREA RAPID TRANSIT SYSTEM will have trains operating as fast as 80 mph. They will reach 50 mph in under 20 seconds.

How computers will control BART operations

The computers will be in charge of trains having anywhere from two to ten cars; the rush-hour headway will be only 90 seconds.

For everyday operations, San Francisco's Bay Area Rapid Transit District will rely on digital computers for monitoring and making strategic decisions for its electrified commuter system. Two Westinghouse Prodac 250 digital computers (third-generation units) will receive reports from trains via automatic identification systems, calculate running times to stations, and send control signals to the trains to provide proper performance to meet schedule levels.

● **Monitor performance.** The central computer (one is a standby unit for train operations) monitors the performance of each train in the system. The arrival time and departure time at each of 33 stations and at each of 19 other locations at which a routing change or sequencing change may be made is transmitted to the computer. Also transmitted is the train number and the intended destination of the train.

The strategy of control was explained by Westinghouse engineers J. W. Brownson and G. M. Thorne-Booth, at the recent IEEE-ASME railroad meeting in Montreal (RA, May 5, p. 38):

"At the beginning of each service day a theoretical schedule of arrival and departure times from these 52 locations is established for each of the 105 trains which may be operating on the BART

system. As each train identifies itself, its actual arrival time is compared to its theoretical arrival time. When this train berths at the next station, this same comparison is made.

"A prediction is then made of the expected arrival of this train at the next station or at the route control point [interlocking]. At the expiration of the station dwell time, which is observed by the actual closing of the car doors, a new arrival time at the next key point is calculated. If this arrival time differs by more than ten seconds from the theoretical schedule arrival time, then an adjustment in the performance of that train is made," Brownson and Thorne-Booth said.

● **Performance modifications.** "These adjustments have been termed Performance Modifications and can achieve a 10% reduction or up to a 50% increase in travel time between adjacent key points [stations or interlockings]. The ideal objective is to keep trains operating in the proper sequence and as close to the theoretical schedule as possible.

"If these performance modification adjustments are not sufficient to maintain these ideal objectives, then it is also possible to make adjustments to the station dwell times or to change the sequence of trains. If the latter approach is taken, attempts will still be made to sequence the dispatch of trains from end-of-line terminals in the proper order."

● **Close headway at rush hours.** BART is planning to operate 2- to 10-car trains spaced 90 seconds apart during rush hours, and tapering off to 15 minutes for late-night and early-morning owl service. Trains are expected to operate at a maximum speed of 80 mph, and to be able to accelerate to 50 mph in less than 20 seconds. Station dwell times will normally be controlled (automatically) between 10 and 30 seconds at rush hours.

To assist passengers, trains will automatically be controlled to stop within ±5 feet at the center of the station platform. Illuminated signs will indicate destination of the train and anticipated door positions.

● **Special data links.** Forty-five dedicated data-transmission links or circuits radiate from BART's operational control center in Oakland to 33 stations and three storage yards. These data links tie the computers to the transit system.

Under normal circumstances, one computer will be in control with the other on standby.

Each data-transmission link continuously transmits the status of field devices to the central computer. This status is stored in the core memory of the computer in control. Field status data goes beyond mere train location, and covers three major areas: (1) Train control status; (2) electrification status; and (3) support facility status. Train control functions or status include:

—Correct tracking of trains throughout the network; verification of routing of trains; detection of arrival and/or departure of trains at stations; detection of arrival and/or departure of trains at interlockings; verification of correct operation of interlocking equipment.

Electrification status

Three types of electrification status are reported to the central computer: (1) Monitor of high-voltage breakers; (2) monitor of low-voltage breakers; and (3) monitor of contact rails. BART is using 1,000 volts dc as traction voltage.

Also, three major areas or types of support facilities are monitored: (1) Line fans, ventilation dampers and sump pumps; (2) emergency telephones; and (3) alarms.

● **Watching and acting.** The central computer will do more than just monitor or watch system and support facility operations. The computer will have a program or set of instructions for each of these three major status areas. Each of these programs will periodically check for changes in status. Each detected change will then be diagnosed as a requested or normal action or an abnormal action (alarm condition).

Over 20 programs are used by the computer in BART operations. Mention of a few indicates the scope of the functions performed by the central computer.

—Magnetic tape logs; car inventory controls; train alarms; program input; data logging; digital telemetry input; train detection; interlocking monitor; BART display board; theoretical schedule; revise train dispatch data; station run through.

● **Process control function.** As the name implies, the BART system is using a process control-type computer. That is, it is operating in real-time. The computer must receive information, make calculations and have the results transmitted to the trains quickly enough so they can operate efficiently and according to the best possible schedule.

Accordingly, the computer performs a simulation of train-running each time a train leaves a station. Part of this important operation is the train identification system that provides train numbers, destination and length. As the train starts out of a station, it sends this identification data to the computer and requests an updating of the performance requirements. The computer-calculated updating information is transmitted to the train before it leaves the station platform.

In order to prepare a program for the process control computer to calculate train running between stations, the Westinghouse Information Systems Laboratory had to make use of computer simulation of the BART system.

"The model of the transit system is essentially a tabular representation of the system corresponding to the discrete locations where control adjustments are made. The simulation is event-oriented and runs faster than real time. It has the feature of injecting small random variations as disturbances to the system in order to more realistically describe the real life system. Larger disturbances can also be put into the system to simulate abnormal delays," reports A. F. Harsch, consultant, WISL.

Computer simulation enabled WISL to test and evaluate various control strategies to determine the best possible train-running calculations and performance commands to be delivered by the control computers to meet the required standard of performance for the system.

In addition to normal operations, computer control will provide for fast decision-making when abnormalities occur and for handling infrequent but out-of-the-ordinary situations, such as track maintenance, handling crowds for sports events at Oakland-Alameda County Coliseum complex, or seasonal shopping crowds. ■

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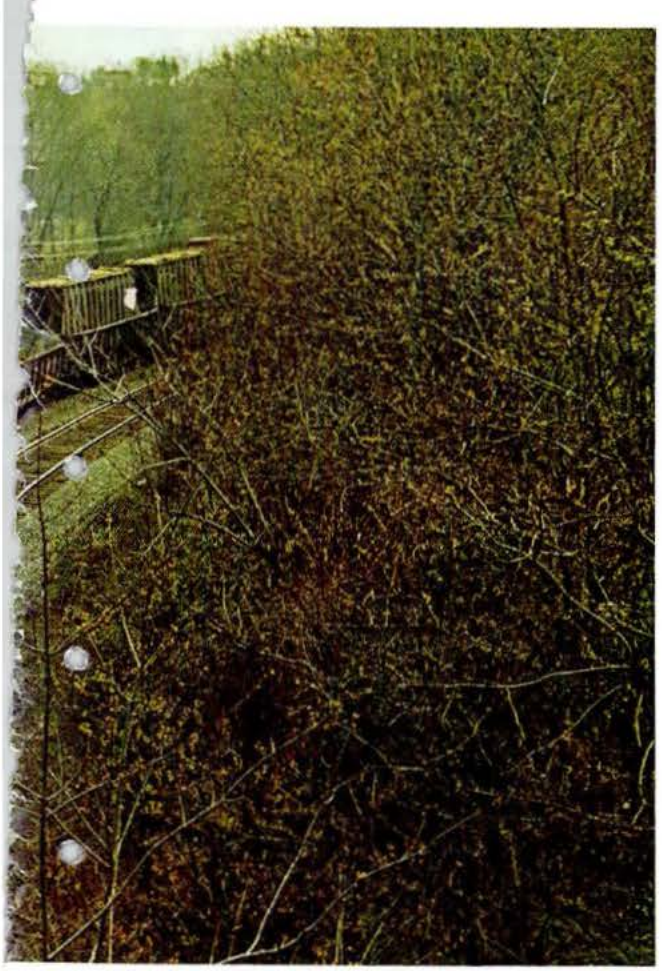

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The story behind Britain's APT

Design features of British Rail's Advanced Passenger Train are outlined here by Dr. Sydney Jones of the British Railway Board.

The Budd Company recently announced that it is heading a consortium seeking North American rights to British Rail's Advanced Passenger Train (APT). These trains would be composed of cars with bodies of lightweight alloy materials assembled with aircraft construction techniques.

● **Speeds up to 125 mph.** The APT trains would be powered with gas turbines or, on electrified lines, electric traction motors. Reliability and ease of maintenance are primary goals of the development. Speeds of 125 mph on existing track and with existing signaling should be possible with maximum passenger comfort, according to the designers.

On a recent visit to New York, Dr. Sydney Jones—who, as research member of the British Railway Board, is heading up the APT program—outlined some of the design features and did some looking ahead—something which he said most railroaders have been reluctant to do.

From the beginning, BR has had as its APT philosophy that these high-speed lightweights would use ordinary track, maintained to ordinary standards, with the vehicles designed to run without flange contact throughout their speed range and even while traversing curves.

● **The key: existing track.** "The central feature of the Advanced Passenger Train is that it takes full speed advantage of existing railway track. By redesigning rail vehicles so they are inherently stable, then we can fully exploit existing railway 'infrastructure'."

Six years ago BR undertook a "system approach" to this problem. A. H. Wickens of the Advanced Projects Group, has been developing a theory of linear dynamics which is making possible wheel-tread and suspension designs that avoid flange contact. Already a four-wheel car with a new and stable "worn-wheel" tread profile has been shown to operate satisfactorily at road speeds of 100 mph and on the BR stationary test plant at simulated speeds to 140 mph.

Wheels and suspensions on the trains would be arranged to counter the "hunting" tendency of conventional trains. Hunting increases the fuel bill. At its worst, hunting can set up sinusoidal distortions in the track. Such distortions can then amplify the instabilities until they can cause derailment. Japanese high-speed trains have adopted a "brute force" method of dealing with this problem. They maintain their track to very high standards. Wheel treads are returned every 6,000 miles—every ten days.

Dynamics of the ride

"Wheel design at APT is such that it emerges from the shop with a stable, worn-wheel profile so that it does not have to return at frequent intervals," Dr. Jones continued. "Six years ago we started a fundamental investigation of what we call the dynamics of ride of railway vehicles. This has led us to the present situation. By the middle of 1968 we felt we knew enough about the fundamental problem to spread our wings and design railway vehicles which owed little to traditional railway design concepts. This involves the suspension, which we tackled as the primary problem.

● **Two-stage program.** "We persuaded the British Ministry of Transport and the British Railway Board to accept a program which would back APT. At the end of 1968, we committed ourselves to a two-stage development program, the first ending in June 1971 when a full-sized, instrumented prototype is to run on a test track now being built.

"It will demonstrate, we are confident, the behavior we predict. For the following two years, we will complete specifications for revenue trains and build two, with completion set for 1974. Something in excess of $30 million has been appropriated for this.

"APT is designed to use existing track at about 125 mph and its pendulum suspension will enable it to traverse curves at speeds 50% over conventional trains. It will have high power-to-weight ratio for high performance, and special braking. All this means we are gunning for a particular market. It is designed for British intercity distances up to 400 miles, competing with "internal" airways. Its break-even point versus air would probably be 400 to 500 miles. Operating costs would probably be comparable with conventional trains but the greater utilization would make the balance favor APT.

● **Scientific approach.** "What we are trying to bring to railroading—perhaps for the first time in this century—is the sort of scientific application that is so common to our competitors. There is finally some interest in answering the question: 'What is the future of surface transport?' We have the air boys bringing to their aid all the technology that is available for forecasting.

"The tendency in railroading is to make prognostications on the basis of recent engineering experience. You want to extend your ability to examine where you stand in railroading with reference to the future, not the past. Recent engineering experience is not adequate to make such a forecast.

"What we at British Railways are attempting to do is formulate a scientific basis for forecast. What we are doing is establishing the basic considerations that inhibit us in expansion of our railroading horizons.

● **The first of several steps.** "I conceive APT as being the first step of a number of steps in surface transportation which are based on the rail mode. First we take the track as it is and run this sophisticated vehicle on it. If we do this successfully, we begin to attract back to the rail the traffic we have lost.

"Then you turn the whole situation around. You have a level of business which justifies further R&D. Up to this point the vehicle has inhibited the program. Having designed a proper vehicle, the next inhibition is the track. To go faster, you need a better and more stable track—stable in the sense of being static and requiring less maintenance. This would require a substantially larger expenditure than would the vehicle, but still not as large as that needed to undertake a new type of track.

● **Then—on to 400 mph.** "The third step—if these two are successful—takes you to the point that you ask: 'Now what prevents us from going still faster?' Let's set aside a moment the problem of whether the public wants to go faster. Designers of aircraft and the air cushion vehicle (ACV) have been using this sort of good scientific argument, but railway engineers have not been using it. Putting ourselves in the same shoes as aircraft designers, I see no technical limitation on guided wheel transport achieving speeds of 300 or 400 miles per hour. But if we don't do the first step successfully, then the second and third are pointless." ■

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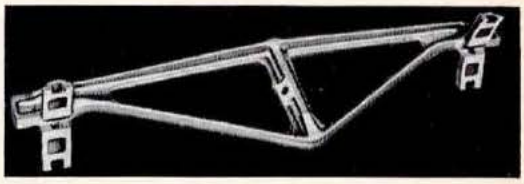

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PARTS REPLACEMENT AGREEMENT

THIS AGREEMENT is between THE TIMKEN ROLLER BEARING COMPANY (hereinafter called the "Company") and _____ (hereinafter called the "Customer"), and is made effective _____ 19___.

In consideration of the purchase by the Customer, on or after the effective date of this Agreement, of Timken® "AP" bearings, for use on railroad freight car applications, the Company hereby agrees as follows:

1. On any Timken "AP" bearing assembly purchased by the Customer during the term of this Agreement for use on freight car applications, the Company will replace or repair, free of charge other than any applicable inspection or service charge otherwise payable and Customer's portion of transportation, any of the parts specified in paragraph 5 below which, within 84 months of the original date of manufacture etched or stamped on the bearing, are found to be in such condition as to require replacement or repair to comply with the standards set forth in the Roller Bearing Manual of the Association of American Railroads as of January 1, 1969. If cup or cone surfaces show evidence of Brinell or fatigue due to normal wear or loading, to the extent that they are not suitable for continued service under standards set forth in the Roller Bearing Manual, the inspection charge otherwise payable will also be waived. If the Roller Bearing Manual should require, or the Customer should specify, that certain parts of the bearing assembly be replaced when the bearing is reassembled, even though such parts are in good condition, the Customer will be charged for the replacement of such parts.
2. The provisions of paragraph 1 above shall also apply, subject only to the 84 months' limitation, to any Timken "AP" bearings purchased by the Customer prior to the effective date of this Agreement.
3. To qualify for replacement of parts under this Agreement, the following requirements must be met, to the best of the knowledge and belief of the Customer and to the satisfaction of the Company:
   a. The condition requiring replacement must be attributable to the quality of material or workmanship in the manufacture of the bearing, and must not be due to damage from derailment, fire, immersion in or exposure to water.
   b. The complete bearing assembly (less axle end cap assembly) including all parts as removed from the axle for inspection must be forwarded to the Company, f.o.b. Columbus, Ohio, fully assembled, and with suitable packaging and/or blocking to prevent damage in shipment and handling, within 84 months of the original date of manufacture, as specified above, with identification of the Customer by or for whom the bearing is being forwarded.
   c. The bearing assembly must have been in use on a freight car operated and maintained in accordance with loading and other rules and standards of the Association of American Railroads for cars in interchange service.
   d. There must not have been any modifications or alterations of the bearing assembly, unless authorized in writing by the Company, nor any improper repairs or any substitution in the bearing assembly of bearing components made by another manufacturer.
4. Following inspection and repair or replacement of parts in accordance with this Agreement, the complete bearing assembly (less axle end cap assembly) will be returned by the Company to the Customer, f.o.b. Columbus, Ohio, subject to such freight allowances as the Company may from time to time establish applicable to all customers of the same class.
5. The bearing parts which are covered by this Parts Replacement Agreement are the cones, cup, cone spacer, seals, seal wear rings, backing rings and vent fittings. Other parts of the bearing assembly - axle end cap, cap screws, locking plate and lubricant fitting - are covered by the warranty referred to in paragraph 6 below.
6. This Parts Replacement Agreement supplements the warranty set forth in the "Conditions of Acknowledgment and Acceptance of your Purchase Order," under which the bearings were originally sold by the Company to the Customer.
7. Except as provided in paragraph 3d above, this Parts Replacement Agreement will apply where the condition of parts requiring replacement or repair has been found upon inspection either by the Company, or by the Customer or any other person for the Customer prior to the forwarding of the complete bearing assembly to the Company in accordance with paragraph 3b above.
8. In the event of any dispute concerning the qualification of a bearing for replacement of parts under this Agreement, the necessity for replacement or repair of particular parts, or any other question concerning the application of this Agreement, the decision of the Company will be final.
9. This Agreement is for a term of _____ months from and after the effective date, and may be extended for successive periods of twelve (12) months by notice in writing from the Company to the Customer. Following the termination of this Agreement, any bearing assembly to which this Agreement became applicable during its initial term or any extension will continue to be eligible for replacement of parts in accordance with the provisions hereof.

IN WITNESS WHEREOF, the Company has executed and delivered this Agreement to the Customer as of the effective date specified above.

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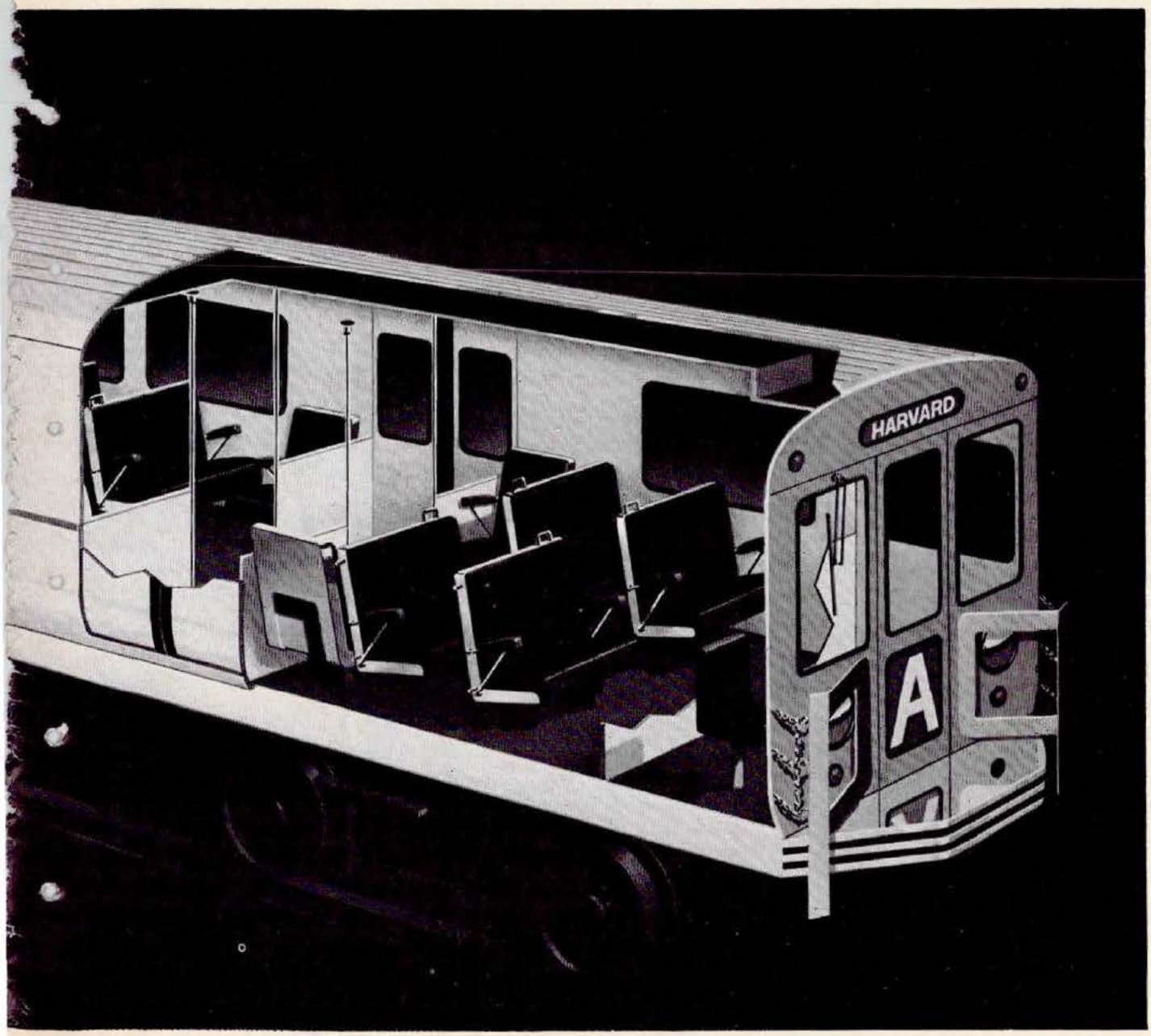

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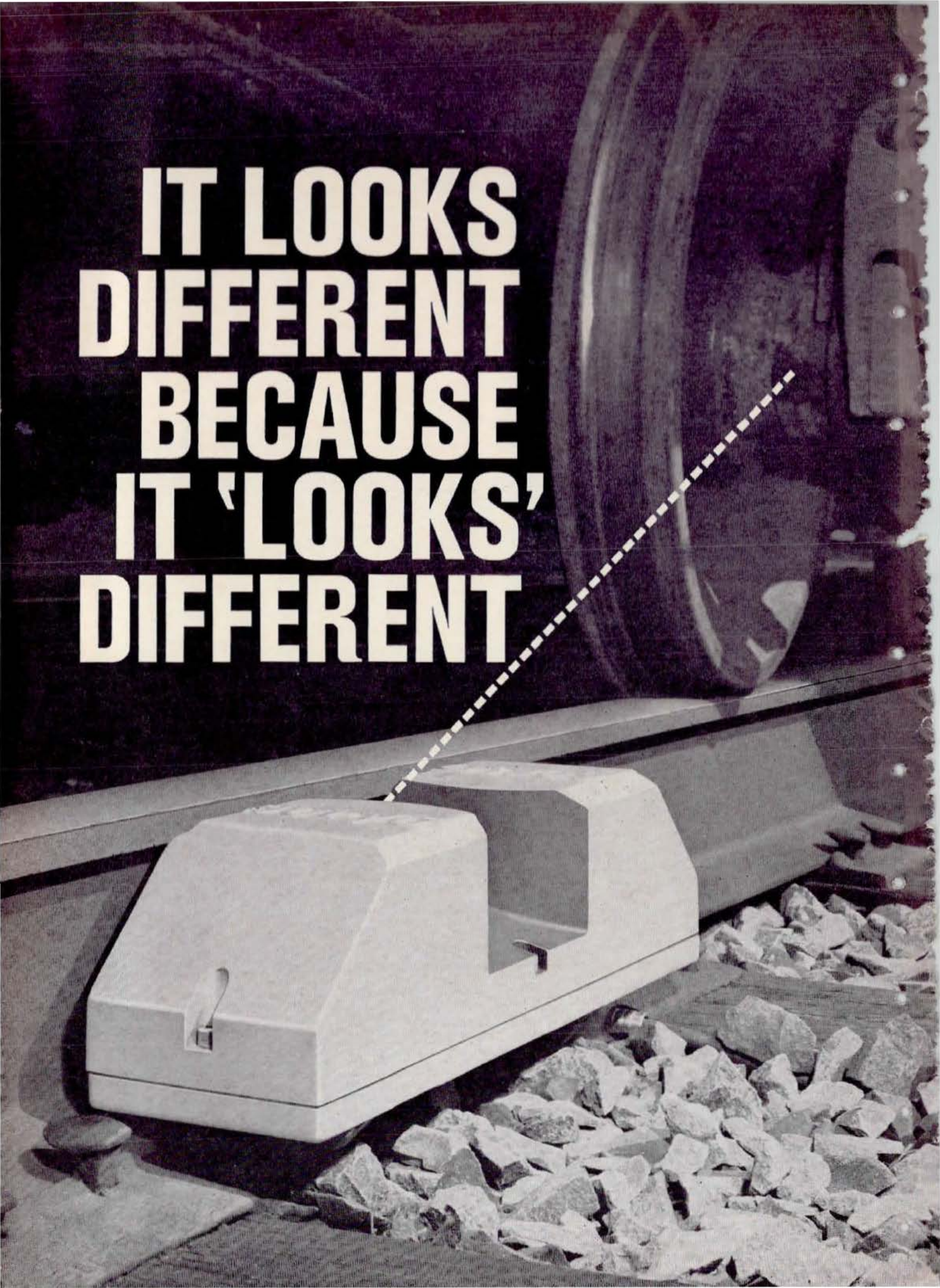
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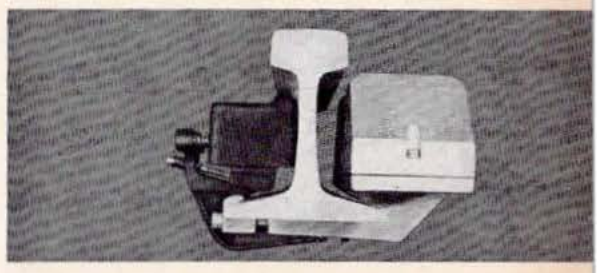
The Model 8808's rail-mounted scanner looks vertically at the bearing journal *behind* the truck frame. This provides a clearer, more uniform scan of the journal, unaffected by truck lateral motion, wheel size variations, or obstructions such as springs and equalizers. The distance between the scanner and journal target is significantly shorter, resulting in increased detection sensitivity and accuracy under all operating conditions including extreme weather. The system is completely compatible with all types of roller and friction bearing journals, regardless of frame or housing configurations.

NOT AFFECTED BY RAIL OR BALLAST CONDITIONS
The scanners and gating transducers are securely clamped to the rail. Drilling is not required. Target-scanning accuracy is not affected by rail pumping, running, or lateral movement since there is no relative motion between the scanner and the wheel. There is no requirement for special roadbed stability or special rail anchoring. Alignment is permanently fixed, eliminating repeated re-alignments and adjustments.



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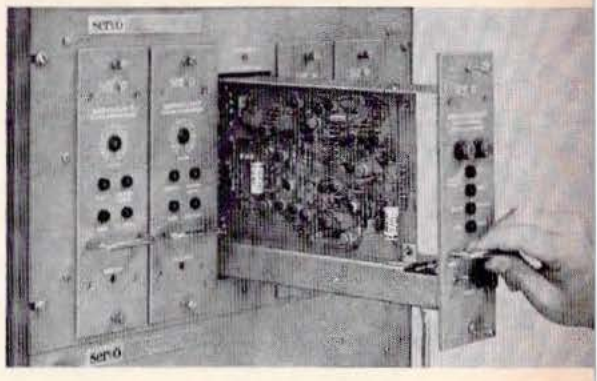

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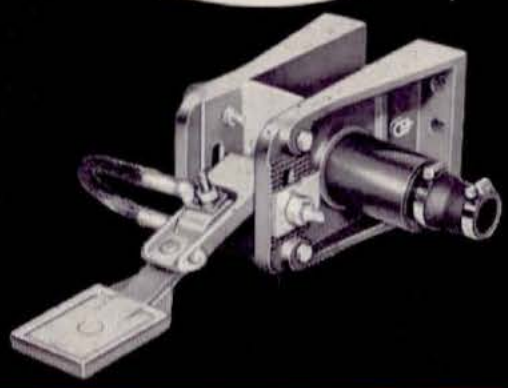

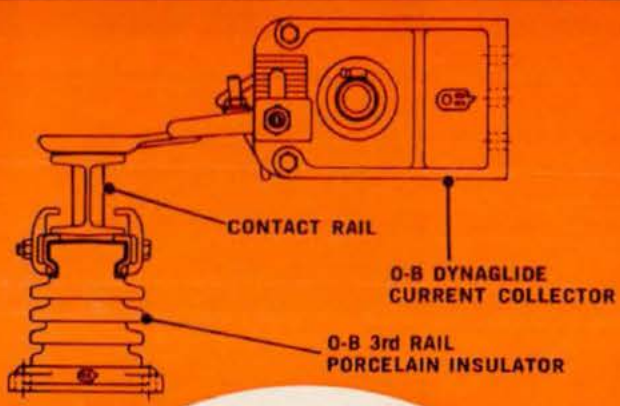

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Circle 17 on coupon page 45

Federal funds for transit on the way

The federal dollar, which has never been able to strike up a warm, friendly relationship with public transportation interests (or is it the other way around?), may soon have a change of heart. Strong, non-partisan support for stronger, steadier financial aid to public transit systems is being whipped up in Washington, the Institute for Rapid Transit was told at its end-of-June annual conference in Chicago. Furthermore, added Carlos C. Villarreal, administrator of the Department of Transportation's Urban Transportation's Administration, and keynote speaker at the two-day meeting: "A public transportation bill for providing funds should be ready soon for action by Congress."

While the final decision on where the supporting funds would originate would have to come from Congress, the new UMTA administrator did hint that the source might be the federal automobile excise tax, a 7% levy which now flows into the general fund. There are alternate sources, Villerreal said, but "the automobile excise tax seems to lend itself best, is most clearly identified, as a source of a trust fund." Mentioned as potential but less logical sources were the alcoholic beverages tax, cigarette tax and a user tax. The latter could come in the form of a tax on automobiles that use the city thoroughfares, or even a small tax on electric light users in the city.

● **Transit needs a steady money source.** A trust fund, William J. Ronan, chairman of the Metropolitan Transportation Authority, New York, and IRT president, told the 350 conferees meeting at the Marriott Hotel, would assure public transportation a reliable money source. Here, Ronan said, is what a trust fund would be able to do:

—Eliminate the present situation where mass transit federal aid is subject to the vicissitudes of annual congressional appropriation and in amounts that have been obviously inadequate;

—Enable public agencies and state and local governments to plan ahead with the kind of assurance that state highway commissioners have enjoyed in developing highway construction programs;

—Give assurance that federal monies would be available, and would be available in amounts that make sense.

While he conceded that the concept of a trust fund, or other long-range commitments of funds, raises "a red flag" among some who feel that it falls beyond good federal fiscal control, Ronan feels that long-range federal participation in urban transportation affairs is not merely desirable, it is absolutely essential. "Those who argue against a trust fund, against earmarking taxes," he argues, "have not yet proposed a suitable alternative. And time is running out on us."

● **Research, too, must have financial boost.** Capital improvements would be the main targets of new federal funds. However, as both Villarreal and Ronan pointed out, a portion of the money should go toward research, encouragement of new technology and toward strengthening transit's future.

In terms of research, there is need for massive federal funding, Ronan told the IRT members. Large sums would be needed "just to catch up after years of total blackout in this area," he added. The billions spent over the years for air research and in highway construction have helped the air industry flourish and make it possible for the auto industry to advance bigger, faster and sleeker models. Transit technology, meanwhile, has made great strides despite a shortage of funds. But, Ronan feels it has just "crossed its threshold," and new developments and larger funds are needed to keep pace with the galloping changes taking place in the nation today.

New York Transit to begin expansion

(Continued from page 15)

Second Avenue subway is a prime project because it is urgently needed to relieve a heavily populated east side and an incredibly overcrowded Lexington Ave. subway.

The new line will be coordinated with other city lines. The existing station at East 138th St. will be reconstructed to permit across-the-platform transferring between Second Avenue, Lexington Avenue, Pelham Bay and Dyre Avenue trains. Straightening out of the White Plains Road line at East 180th St. will also permit across-the-platform transferring, reducing travel time from East 241st St. to 42nd St. from 43 minutes to less than 30 minutes.

The major problem in routing the new Second Avenue line has been what is referred to as the lower east side bulge of Manhattan. The island-heart of the city "bulges" farther eastward south of 23rd St. than north of it. Numerous groups have argued that a direct route straight down Second Avenue would not meet the needs of thousands of persons located in that bulge. The groups involved have proposed routing the line several blocks eastward south of 23rd St. But, the MTA has noted both social and engineering problems in arguing against any change in the direct route plan.

The more than $200,000,000 allocated for the Second Avenue line (to 34th St.) will permit construction of a basic two-track subway, expandable to four tracks in the future.

● **SIRT and Brooklyn.** The Staten Island Rapid Transit, a 14-mile line extending the full length of New York City's "last frontier" and last improved in 1925, will be modernized and re-equipped. A $25,000,000 program has been designed to make SIRT a modern, high-speed, rapid transit line. The program is made all the more necessary by predictions of doubled population and employment on Staten Island by 1985.

In the borough of Brooklyn, over $72,000,000 will be spent for seven miles of subway extensions to serve areas now relatively remote from rapid transit lines. An obsolete elevated line will also be removed and relocated in the bed of a proposed Queens-Interborough Expressway.

The MTA will order 600 new air-conditioned, high-speed subway cars for the new and expanded lines of the Phase I program. The new cars will provide year-round temperature controls and improved seating and other conveniences to satisfy modern travel demands. ■

LUTHER MILLER

AS THE EDITOR SEES IT

IN THE HEAT of special-interest infighting, it is sometimes easy to forget that all of us in transportation—indeed, in business generally—have a common enemy that towers darkly above all others. It's inflation. Few industries are more vulnerable to the blight of runaway wages and prices than the railroad industry. This is made chillingly clear by Northwest Industries President Ben W. Heineman in a mid-year report on railroads prepared for the First National Bank of Chicago.

"THE CHAIN OF EVENTS which led to the present depressed level of rail earnings [writes Mr. Heineman] began when freight rates were reduced over a period of years starting in 1958 in efforts to retain traffic which the railroads were losing to other transportation modes. This strategy bolstered profits, as healthy traffic growth through 1966 was sufficient to offset the lower rates and moderately increasing operating costs. This state of affairs ended with the onset of inflationary wage increases in 1967."

"FROM 1958 TO 1968 [he continues] wages increased an average of 3.5% per year. In 1967 and 1968, however, average employee earnings increased 4.5% and 7%, respectively. The 1969 increase is estimated at 6%." One result of this has been a series of freight rate increases, which still, however, fall short of meeting increased costs. Another has been a seeking of nonrail sources of income. This year, Mr. Heineman says, 40% of the railroads' income will come from nonrail sources.

AS MR. HEINEMAN SEES IT: "The fate of the railroad industry during the latter half of 1969 and thereafter will depend to a great extent on current efforts to curb inflation. If these efforts are not successful, the inflationary wage demands will continue, and the industry may have to resort to additional general freight rate increases."

PRESIDENT NIXON'S current batch of anti-inflationary reforms includes repeal of the 7% investment tax credit. While we still think a good case can be made for exempting railroads from repeal of this investment-encouraging device (a modern, healthy railroad system being, in itself, a proven anti-inflationary factor), that battle seems lost. But if the President's over-all objective of taming inflation is achieved in any substantial degree, loss of the tax credit will be a small enough price to pay.

First Quarter Figures of Calendar Year 1969

(Dollar figures are stated in thousands: i.e. with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1969	1968	Operating Expenses: Maint. Way and Structures: Total 1969	1968	Deprec. and Retirements	Maint. Equipment: Total 1969	1968	Deprec. and Retirements	Traffic	Transportation	Total 1969	1968	Operating ratio 1969	1968	Net from railway operation	Railway tax accruals	Net Railway operating income 1969	1968
Akron, Canton & Youngstown	3 mos.	171	1,755	—	1,829	2,006	258	232	20	354	401	130	116	649	1,494	1,568	81.7	78.2	335	205	228	319
Ann Arbor	3 mos.	293	2,387	—	2,420	2,276	216	234	28	362	443	139	69	1,153	1,868	1,946	77.2	85.5	552	186	147	—22
Atchison, Topeka & Santa Fe	3 mos.	12,883	157,831	4,321	173,731	163,920	23,876	23,551	2,410	34,665	36,628	10,779	4,590	64,632	136,050	134,891	78.3	82.3	37,682	17,461	17,907	12,046
Baltimore & Ohio	3 mos.	5,624	100,509	777	106,071	101,102	11,613	11,398	1,462	19,153	16,925	2,671	3,089	41,779	82,218	78,936	77.5	78.0	23,853	7,916	3,385	—11
Bangor & Aroostook	3 mos.	543	3,638	64	3,770	3,669	847	826	67	1,104	1,117	410	88	1,257	3,541	3,587	93.1	97.8	230	302	317	154
Bessemer & Lake Erie	3 mos.	221	5,234	—	5,503	6,066	824	883	129	1,399	1,189	192	147	1,757	4,783	4,745	86.9	78.2	721	835	867	652
Boston & Maine	3 mos.	1,531	14,303	1,261	16,962	15,891	2,618	2,239	415	2,785	2,652	645	369	8,100	14,814	13,867	87.3	87.3	2,148	1,327	—1,549	—1,248
CPR Lines in Maine	3 mos.	234	2,717	35	2,792	1,904	348	328	61	340	308	46	46	627	1,490	1,357	53.4	71.3	1,302	81	768	156
Central of Georgia	3 mos.	1,729	12,920	224	13,508	12,363	3,487	2,417	207	2,440	2,652	754	288	4,898	11,984	10,998	88.7	89.0	1,524	153	593	231
Central RR of New Jersey	3 mos.	593	9,465	941	12,120	12,033	1,473	1,463	270	2,188	2,142	394	308	6,159	10,988	11,198	90.7	93.1	1,132	1,111	—1,719	—1,851
Central Vermont	3 mos.	382	2,188	—	2,257	1,947	452	464	55	313	320	13	31	903	1,877	1,754	83.2	90.1	380	200	—137	—262
Chesapeake & Ohio	3 mos.	5,106	90,551	425	94,295	92,868	10,789	10,200	1,495	19,959	19,268	6,187	2,766	39,334	78,594	76,187	83.3	82.0	15,701	8,228	5,862	9,871
Chicago & Eastern Illinois	3 mos.	935	11,721	23	12,446	11,248	2,350	1,498	250	2,237	2,433	563	404	4,376	9,872	9,355	82.2	83.2	2,574	560	67	—483
Chicago & Illinois Midland	3 mos.	121	1,302	—	1,337	1,236	90	119	21	226	207	36	7	341	780	818	58.4	66.2	557	356	195	129
Chicago & North Western	3 mos.	11,557	57,611	5,068	65,468	67,113	10,419	9,065	1,616	13,537	11,891	4,222	2,317	30,371	61,776	56,655	94.4	84.4	3,692	5,843	—8,708	894
Chicago, Burlington & Quincy	3 mos.	8,458	62,586	3,456	71,342	66,945	9,014	8,687	1,253	13,194	12,759	4334	2,155	30,170	58,596	55,452	82.1	82.8	12,746	6,018	3,383	3,686
Chic., Milw., St. Paul & Pacific	3 mos.	10,512	57,977	2,431	65,192	64,497	9,506	7,737	1,368	12,246	10,344	3,294	1,985	29,465	57,594	52,296	88.3	81.1	7,598	6,086	—3,781	2,212
Chicago, Rock Island & Pacific	3 mos.	7,277	57,486	1,430	61,672	58,575	9,359	7,867	1,429	11,083	10,234	1,899	1,840	26,826	52,492	48,239	85.1	82.4	9,180	4,784	—4,032	—1,529
Clinchfield	3 mos.	306	8,163	1	8,215	7,606	826	788	72	1,219	1,162	605	259	2,175	4,751	4,622	57.8	60.8	3,463	756	2,662	2,339
Colorado & Southern	3 mos.	708	3,789	—	3,881	3,759	410	373	37	662	721	305	70	1,356	2,779	2,604	71.6	69.3	1,102	380	560	747
Ft. Worth & Denver	3 mos.	1,280	3,791	—	3,997	5,604	697	621	98	556	593	114	191	1,830	3,643	3,686	91.2	65.8	354	284	—415	911
Delaware & Hudson Ry.	3 mos.	734	10,655	179	11,145	10,275*	1,180	1,200*	112	1,835	2,180*	388	344	4,196	8,353	8,252*	75.0	80.3*	2,792	1,292	1,294	861*
Denver & Rio Grande Western	3 mos.	2,145	22,942	275	23,548	21,847	2,150	2,198	374	3,839	3,624	1,335	883	7,863	16,188	15,368	68.7	70.3	7,360	3,723	3,426	3,364
Detroit & Toledo Shore Line	3 mos.	50	1,739	—	1,867	1,701	197	151	14	284	261	111	65	657	1,312	1,180	70.3	69.3	554	197	176	136
Detroit, Toledo & Ironton	3 mos.	467	7,978	—	8,351	7,797	604	595	87	1,136	1,553	641	221	2,670	5,051	5,389	60.5	69.1	3,300	558	2,014	1,202
Duluth, Missabe & Iron Range	3 mos.	515	3,525	—	3,652	2,897	1,172	1,127	206	1,460	1,317	545	54	1,834	5,331	4,898	146.0	169.0	—1,679	Cr 427	—1,010	—970
Duluth, Winnipeg & Pacific	3 mos.	170	2,145	—	2,169	2,698	294	222	16	195	217	2	45	788	1,383	1,323	63.7	49.0	787	497	38	537
Elgin, Joliet & Eastern	3 mos.	205	9,604	—	14,585	14,486	1,334	1,125	100	2,524	2,549	515	174	5,775	11,310	10,478	77.5	72.3	3,275	1,736	680	987
Erie Lackawanna Ry.	3 mos.	2,904	52,801	2,836	60,435	57,934 #	5,794	6,186 #	819	9,750	11,217 #	1,842	1,304	26,729	46,265	50,315 #	76.6	86.9 #	14,170	4,829	4,230	—3,084 #
Florida East Coast	3 mos.	571	8,218	—	8,369	6,684	2,685	1,446	235	1,265	1,291	291	199	2,119	6,737	4,958	80.5	74.2	1,632	761	—106	85
Georgia Railroad	3 mos.	331	2,269	3	2,423	2,267	365	359	37	380	417	99	141	872	1,909	1,981	78.8	87.4	514	154	219	—22
Grand Trunk Western	3 mos.	946	17,578	484	19,218	17,322	1,979	1,754	183	2,500	2,535	196	414	9,747	15,726	13,941	81.8	80.5	3,492	1,717	—2,817	—1,179
Great Northern	3 mos.	8,275	58,990	1,588	64,085	61,126	10,304	8,407	1,065	12,120	10,919	3,601	1,990	28,057	57,199	51,059	89.3	83.5	6,887	6,747	—213	3,166
Gulf, Mobile & Ohio	3 mos.	2,734	22,762	427	24,492	23,710	3,221	2,954	271	4,912	4,534	1,360	919	8,359	18,500	17,406	75.5	73.4	5,992	2,208	2,582	2,679
Illinois Central	3 mos.	6,786	68,254	5,618	77,556	74,173	9,440	9,873	1,678	13,075	13,461	4,111	2,278	30,378	60,378	60,792	77.9	82.0	17,178	7,941	5,691	2,216
Illinois Terminal	3 mos.	340	2,195	—	2,451	2,385	279	318	11	401	456	110	66	1,002	1,940	2,064	79.2	86.5	510	206	34	—202
Kansas City Southern	3 mos.	1,628	18,535	124	19,737	19,698	2,077	2,112	238	3,165	3,273	1,203	770	6,651	13,564	13,666	68.7	69.4	6,173	2,019	2,759	2,654
Kansas, Oklahoma & Gulf	3 mos.	209	1,266	—	1,266	1,393	147	122	9	279	354	183	87	287	859	944	67.8	67.8	407	130	656	722
Lake Superior & Ishpeming	3 mos.	130	131	—	215	232	262	258	68	364	352	191	11	315	1,046	1,011	486.7	436.2	—831	155	—923	—899
Lehigh Valley	3 mos.	946	11,222	—	11,739	11,343	1,492	1,445	258	1,696	1,598	310	395	6,078	10,422	10,214	88.8	90.0	1,317	999	—1,575	—1,488
Long Island	3 mos.	322	2,173	18,047	21,078	20,850	2,859	2,618	263	5,459	5,115	605	239	13,068	23,048	21,322	109.3	102.3	—1,970	1,570	4,678	—2,795

First Quarter Figures of Calendar Year 1969

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1969	Total (inc. misc.) 1968	Operating Expenses: Maint. Way and Structures Total 1969	Maint. Way and Structures Total 1968	Maint. Way and Structures Deprec. and Retirements	Maint. Equipment Total 1968	Maint. Equipment Total 1968	Deprec. and Retirements	Traffic	Transportation	Total 1969	Total 1968	Operating ratio 1969	Operating ratio 1968	Net from railway operation	Railway tax accruals	Net Railway operating income 1969	Net Railway operating income 1968
Louisiana & Arkansas	3 mos.	Included in Kansas City Southern																				
Louisville & Nashville	3 mos.	5,708	75,554	358	78,563	73,494	10,874	9,596	1,209	16,876	15,802	6,339	1,991	28,750	63,235	59,959	80.5	81.6	15,328	6,267	8,388	6,609
Maine Central	3 mos.	921	6,463	—	6,584	6,215	1,512	1,076	88	1,344	1,230	292	128	2,461	5,834	5,012	88.6	80.7	751	459	—15	443
Missouri-Illinois	3 mos.	444	1,622	—	1,640	1,766	200	116	33	606	576	351	23	369	1,268	1,160	77.3	65.7	372	288	1,017	1,128
Missouri-Kansas-Texas	3 mos.	2,789	14,842	—	15,405	16,522	2,069	2,216	270	1,987	1,946	459	799	5,934	11,595	11,568	75.3	70.0	3,810	1,305	32	719
Missouri Pacific	3 mos.	8,979	80,102	393	85,238	78,042	12,774	11,095	1,265	13,850	12,823	3,366	2,060	29,535	62,417	57,399	73.2	73.6	22,822	6,777	7,992	7,102
Monon	3 mos.	540	5,386	—	5,606	5,108	681	562	60	760	798	232	250	2,069	4,153	3,857	74.1	75.5	1,453	420	415	414
Monongahela	3 mos.	193	1,322	—	1,332	1,667	331	241	35	211	159	34	3	427	1,016	901	76.3	54.1	316	84	—64	194
New York, New Haven & Hartford	3 mos.	Included in Penn Central																				
Norfolk & Western	3 mos.	7,585	154,082	425	160,054	154,765	15,011	14,672	2,373	26,480	24,766	11,412	3,602	59,208	111,795	108,149	69.8	69.9	48,259	15,953	25,234	24,605
Norfolk Southern	3 mos.	624	2,933	—	2,981	2,739	539	423	74	492	423	184	159	944	2,405	2,102	80.7	76.7	576	238	164	240
Northern Pacific	3 mos.	6,772	47,094	897	50,026	47,320	7,343	6,148	1,029	10,788	9,510	3,284	1,695	23,045	47,126	42,118	94.2	89.0	2,900	5,309	—833	905
Northwestern Pacific	3 mos.	324	2,613	1	2,626	2,398	897	504	64	142	99	3	20	831	1,989	1,462	75.7	61.0	638	248	—202	174
Penn Central	3 mos.	20,530	331,533	35,631	405,953	382,181	43,657	40,326	7,642	65,505	64,886	15,982	6,347	196,854	338,897	316,224	83.5	82.7	67,056	29,679	—10,094	—2,932
Penn-Reading Seashore Lines	3 mos.	322	1,891	18	2,089	1,974	407	425	55	350	388	66	15	1,346	2,230	2,289	106.7	115.9	—141	174	—893	—957
Piedmont & Northern	3 mos.	150	1,742	—	1,792	1,678	157	155	26	138	117	31	115	395	969	913	54.1	54.4	824	407	232	244
Pittsburgh & Lake Erie	3 mos.	209	7,881	16	8,489	8,440	962	977	157	2,892	2,489	1,439	198	3,484	8,207	7,796	96.7	92.4	282	2,371	2,537	2,796
Reading	3 mos.	1,228	20,809	1,936	25,267	26,442	3,721	3,666	601	5,021	5,097	1,509	768	11,402	22,781	22,707	90.2	85.9	2,486	2,113	—1,615	371
Richmond, Fred. & Potomac	3 mos.	118	5,574	960	7,525	6,140	629	529	108	929	871	246	93	2,256	4,575	4,131	60.8	67.3	2,950	1,689	1,083	699
St. Louis-San Francisco	3 mos.	4,570	41,102	—	43,113	38,204	5,527	5,441	834	6,013	5,563	2,166	1,502	16,301	31,770	28,279	73.7	74.0	11,343	4,270	4,832	4,320
St. Louis Southwestern	3 mos.	1,566	29,155	—	29,584	25,462	2,255	1,933	223	4,523	3,892	2,371	748	9,013	17,318	15,285	58.5	60.0	12,266	4,217	8,162	7,724
Savannah & Atlanta	3 mos.	167	1,166	—	1,191	1,191	68	208	8	218	156	87	28	343	729	824	61.2	69.2	461	284	230	200
Seaboard Coast Line	3 mos.	9,129	109,594	6,110	121,756	107,874	14,861	13,899	1,600	19,772	19,673	6,125	3,582	46,066	90,733	84,772	74.5	78.6	31,023	11,285	10,825	7,235
Soo Line	3 mos.	4,694	24,072	—	24,638	22,410	3,472	2,801	332	3,537	3,050	891	802	9,847	18,848	16,482	76.5	73.5	5,790	1,992	1,528	2,564
Southern Railway	3 mos.	6,075	87,545	930	92,719	83,101	10,736	9,333	1,304	15,282	14,389	4,731	2,005	29,000	61,951	57,491	66.8	69.2	30,768	12,912	13,279	11,448
Alabama Great Southern	3 mos.	530	9,108	91	9,657	8,948	2,446	1,132	194	2,132	1,707	604	209	3,280	8,706	6,566	90.1	73.4	952	355	—255	1,143
Cinn., New Orleans & Tex. Pac.	3 mos.	337	12,202	30	12,851	11,965	1,222	1,236	232	2,814	2,556	1,056	271	3,641	8,487	8,116	66.0	67.8	4,365	1,950	2,573	2,678
Georgia Southern & Florida	3 mos.	395	4009	—	4,242	3,698	511	578	52	217	190	26	73	1,034	1,989	1,883	46.9	50.9	2,253	642	547	346
New Orleans & Northeastern	3 mos.	Merged into Alabama Great Southern January 31, 1969.																				
Southern Pacific	3 mos.	11,766	211,069	2,407	220,665	199,818	25,188	22,096	2,737	41,916	39,085	13,875	3,773	86,935	171,540	154,963	77.7	77.6	49,125	21,040	17,129	16,144
Spokane, Portland & Seattle	3 mos.	922	8,739	124	9,595	10,153	1,296	1,488	159	1,776	1,522	400	142	4,216	7,919	7,606	82.5	74.9	1,676	895	147	997
Texas & Pacific	3 mos.	1,967	19,910	66	21,337	18,741	2,776	2,805	297	3,672	3,542	1,268	748	7,767	15,873	15,215	74.4	81.2	5,464	1,546	2,361	1,144
Toledo, Peoria & Western	3 mos.	239	2,315	—	2,458	2,104	265	201	21	223	199	56	181	846	1,701	1,482	69.2	70.4	757	265	241	182
Union Pacific	3 mos.	9,483	139,777	2,527	149,849	139,738	17,113	16,908	1,827	27,125	27,134	11,991	4,106	54,992	113,796	108,112	75.9	77.4	36,053	20,813	16,199	16,578
Western Maryland	3 mos.	866	11,489	—	12,140	12,517	1,836	1,861	274	2,837	3,329	948	461	4,454	10,298	10,901	84.8	87.1	1,841	1,116	1,462	1,728
Western Pacific	3 mos.	1,176	15,795	282	16,501	15,412	2,029	2,023	292	3,356	2,813	981	942	6,621	14,428	12,792	87.4	83.0	2,073	1,046	514	1,233

* Report of Delaware and Hudson Railroad Corporation

\# Report of Erie Lackawanna Railroad Company

FRANK MALONE

WATCHING WASHINGTON

IN SUMMER, students jam the monuments in D.C. But the arched corridors of the venerable ICC haven't ever been clogged with tourists. This year, things are a little different. How many students are lining up for the Commission, you ask? Just seven. But that's enough, when they're known as "Nader's Raiders." That means Ralph Nader, the consumer's consumer. You may remember the scalding of the Federal Trade Commission that followed last summer's Washington "raid." Whether you can expect the same for ICC remains to be seen.

THE FTC was characterized as an overload of incompetents who catered too much to politicians and businessmen, and too little to consumers. The students disclosed "alcoholism, spectacular lassitude and office absenteeism, incompetence by the most modest standards, and lack of commitment."

ONE PERSON who says absolutely that ICC will come out better is 24-year-old Bob Fellmeth, the Harvard law school senior chosen by Nader to direct the ICC project. "I know from what I've learned so far that ICC is a different kind of organization. I don't know just what we'll find, but I don't expect the same thing. There are structural differences between the two. There aren't the same personnel issues, either." Fellmeth says ICC apparently isn't run by one political appointee as FTC was. He adds that the press distorted the FTC report by playing up the small part on personnel and ignoring the major part on substantive failures.

FELLMETH should know. He was here last summer. "I was chosen to head this group on the basis of my FTC performance," he says. He's the first non-lawyer (though he's a law student) to direct the enactment of a Nader dream. His education has been "very strong in antitrust and economic regulation." The same goes, he says, for his group—four other Harvard law students and two from the University of Pennsylvania.

THE STUDENTS want all the material they can lay hands on. Reports and speeches are easy. Commissioners' correspondence is something else. For that, they'll need the magic that Nader used on FTC. They're chasing the same issue: How are taxpayer dollars used to protect taxpayer interests? For their answer, you may have to wait a while. Though the FTC tour was made in summer 1968, the report came out in January 1969.

LETTERS

Laying 10 miles of track

Los Angeles, Calif.

To the Editor:

Enjoyed your account (May 19) of the Golden Spike Centennial festivities but must set the record straight on one score. As Secretary Volpe found out belatedly, the Chinese accomplished much in building the Central Pacific, but they did not lay 10 miles of track in one day. That honor goes to eight Irish workmen whose descendants, I'm sure, are prepared to take up shillelaghs in defense of their unbroken record.

Thomas C. Buckley
Assistant Manager
Public Relations Dept.
Southern Pacific Co.

(Reader Buckley is correct. A newspaper correspondent who was present on April 29, 1869, reported: "It may seem incredible, but nevertheless it is a fact that the whole ten miles of rail were handled and laid down this day by eight white men. These men were Michael Shay, Michael Kennedy, Michael Sullivan, Patrick Joyce, Thomas Dailey, George Wyatt, Edward Kioleen, and Fred McNamara. These eight Irishmen in one day handled more than 3,500 rails—1,000 tons of iron."—*Editor.*)

Who subsidizes whom?

Flossmoor, Ill.

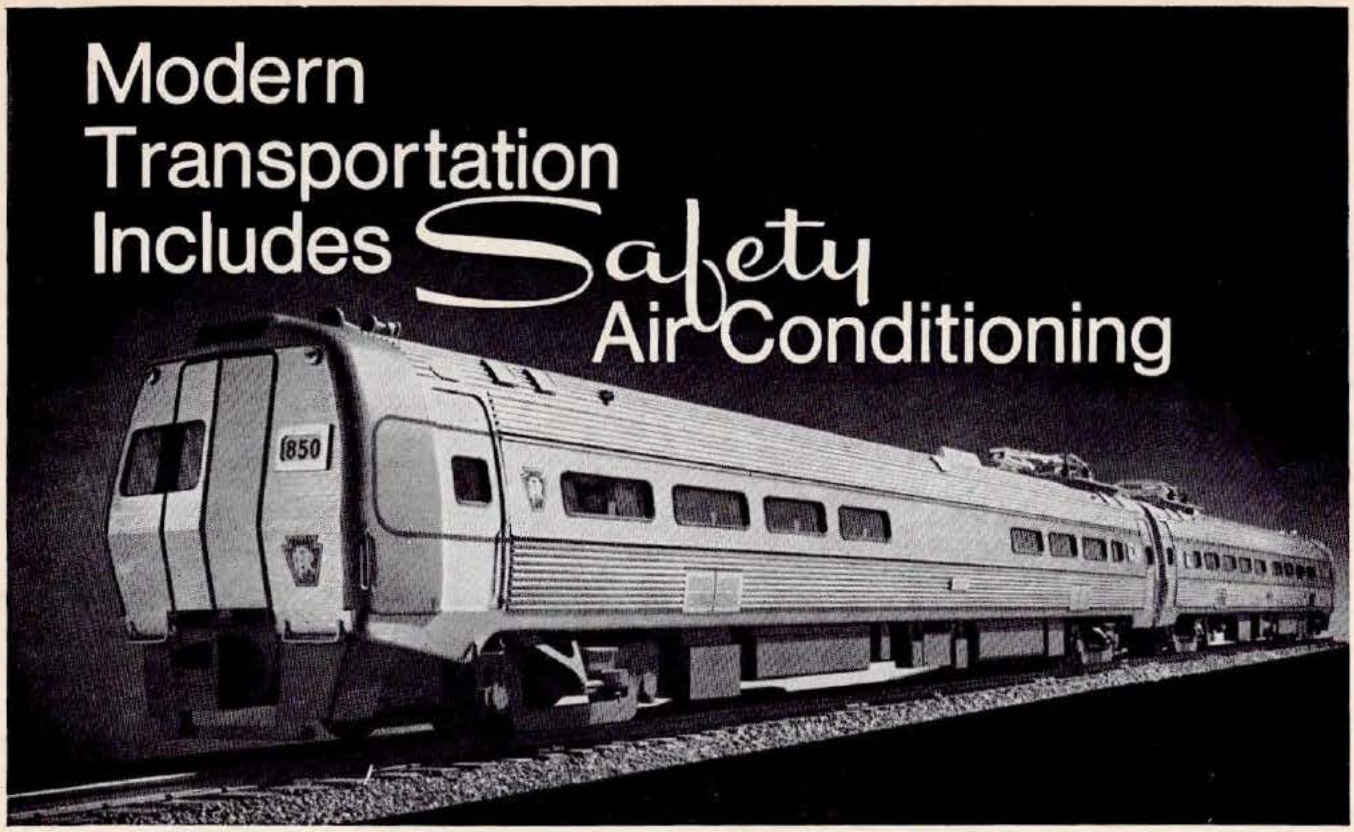
To the Editor:

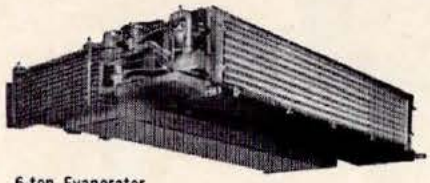
I note that the question of shippers subsidizing the passenger train is again being discussed in the pages of Railway Age. It is interesting that the other side is never presented. That is, that in many cases—over the years and at the present—the passenger train has been subsidizing the shipper.

No one really knows just what the passenger loss amounts to—but I think most (including the ICC) agree it is actually far less than the $500-plus million that is so often claimed. Much of that large figure comes from the apportionment of fixed overhead costs between the passenger and freight operations. When the passenger trains vanish, the freight operation must bear the full cost of track maintenance, superintendence, etc. ATSF's Ernest Marsh once mentioned that even though passenger trains bear a certain percentage of bridge maintenance costs, without them the bridges would still be there—no one can do with half a bridge.

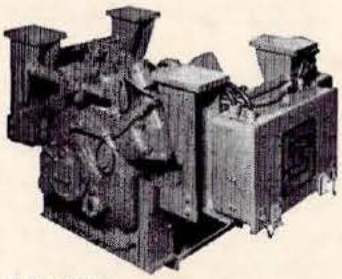
Kevin McKinney
Editor
Passenger Train Journal

Modern Transportation Includes Safety Air Conditioning





6-ton Evaporator and Blower Assembly, overhead unit



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NEW PRODUCTS REPORT

Vacuum truck (RA-1)

A vacuuming unit, the Vac-All, mounted on a flat-bed truck has been found useful in removing grain from derailed cars and for clearing spilled grain from the derailment site. Virtually all hand labor was eliminated in the clearing operations. Two trucks moved to the cars, picked up the grain through the vacuum hoses at a rate of 16 cu yd in 20 min., and transported it to other trucks so it could be hauled away for reclamation. *Central Engineering Co.*

Power sweepers (RA-2)

According to the manufacturer, the new Starsweep power sweepers can sweep up to 7½ acres per hour in open areas. Models 654 (gasoline powered) and 654LP (LPG powered) can sweep a 6-ft aisle in one pass, a 12-ft aisle in one round trip, and up to 333,000 sq ft per hr—with an optional lefthand side broom and the 10-mph option. The sweepers are said to maneuver easily and safely both in open and congested areas. *Wayne Manufacturing Co.*

Protector test set (RA-3)

A simple, portable, non-destructive tester is available to ensure that gas-filled arresters are functioning within their rated strike voltage.

Protector test set type 169 provides a ready means of checking all protectors designed to strike within the 0-1000 volt range. It features a solid-state DC voltage generator powered by an internal rechargeable battery. *AEI Telecommunications, Eugene Munsell & Co.*

NEW LITERATURE

TANK CAR. "Designed with the user in mind" is the name of a new Union Tank Car Co. brochure about its Changeable-Car. The brochure focuses on Changeable-Car's fast, complete unloading, easy interior cleaning, low tare weight, minimum track space and other user-oriented features. (NL-1)

HORSEPOWER INDICATOR. A new Audn Corp. data sheet describes the solid-state electronic Powerfinder designed to provide a continuous indication of the exact horsepower developed by a diesel locomotive at the input end of its traction motors. (NL-2)

RAILCAR RAMPS. Rite-Hite Corp.'s new 6-page, 3-color brochure features the Rite-Hite railcar ramps for fast, efficient and safe loading or unloading of rail shipments. (NL-3)

ROLLER BEARING ADAPTER. "Roller Bearing Adapter Mountings for Railroad Cars" is offered as a reprint from Lord Manufacturing Co.'s Library of Vibration/Shock/Noise Control. The paper describes the development, advantages and tests of an elastomeric sandwich mounting to be installed between roller bearing adapters and truck side frames of railroad cars. (NL-4)

BULK LOADING. A new 4-page, illustrated brochure is available on the Nolan Co.'s automatic bulk loading station. The work-saving device automatically loads hopper and gondola cars of varying height in random sequence. (NL-5)

RAILWAY AGE
THE TRANSPORTATION WEEKLY

30 Church Street, N.Y., N.Y. 10007 READERS' SERVICE (Att. J. Lindstrom)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

PLEASE SEND INFORMATION ABOUT PRODUCTS AND LITERATURE DESCRIBED ON PAGE 45 MARKED: RA-1 RA-2 RA-3 NL-1 NL-2 NL-3 NL-4 NL-5

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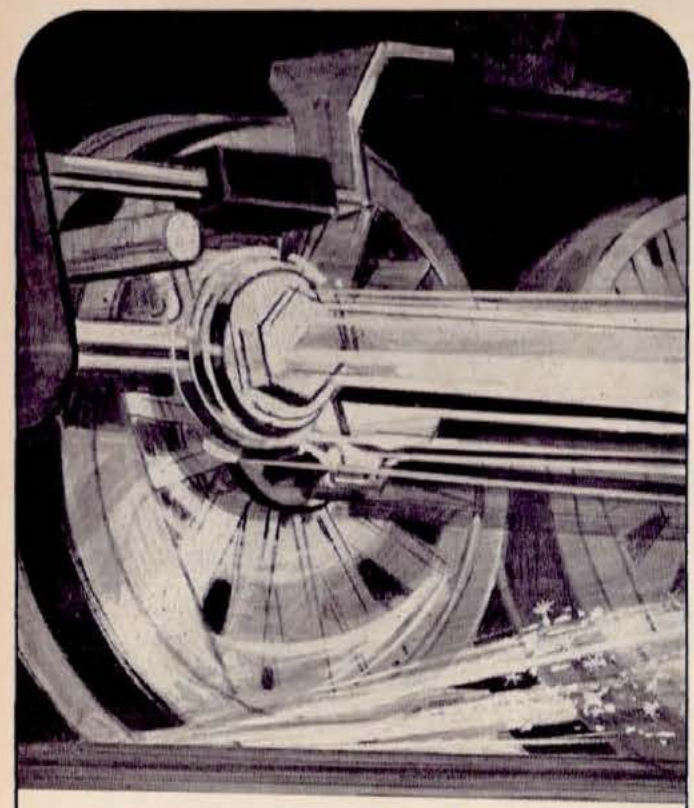
Circle 19 on coupon page 45



stops slipping
starts gripping

Summit Locomotive Electronic Wheel Slip Control System from Barco

When locomotive wheels start to slip, the Barco-Summit Electronic Wheel Slip Control takes over instantly. Using the Rate-Of-Change principle the control reduces power in a split second. Besides eliminating wheel and rail damage, the Wheel Slip Control allows longer trains to be pulled with the same power. Available for both AC & DC locomotives. Can be installed in the field on older locomotives.

The Barco-Summit Locomotive Wheel Slip Control System is ruggedly designed and its performance is proved. There's no interference with normal locomotive function and locomotive electrical circuits remain unaltered. For more information on this system, just write
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BARCO

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Circle 22 on coupon page 45

The land bridge: Myth or method?

F. E. Kriebel, vice president—traffic, Southern Pacific, presented some rather sobering views on the land bridge problem at the First Annual International Marketing Seminar at Northwestern University, June 26. Kriebel noted that much of the publicity now being given the land bridge is based on oversimplifications of the problems involved usually based upon present and upcoming technological capabilities. "Technological capability alone is simply not going to make it happen," he said, "not as long as thousands of shippers, receivers, transportation companies, port authorities and other companies exist separately, with each continuing to measure its own success in terms of autonomous action producing individual corporate sales, profits and other accepted yardsticks of economic activity."

● **Problems.** The solutions to the monumental complexities involved with the land bridge have barely been scratched, according to Kriebel. The Trade Simplification Act of 1968, which was recommended by the DOT but failed to win support of the 90th Congress, was an attempt. It would have permitted the establishment of joint rates between carriers in the U.S. and those operating solely in a foreign country.

In a recent discussion of this bill ICC chairman Virginia Mae Brown listed the major land bridge problems as joint rates, interchange of equipment, simplified documentation of international trade agreements, and international agreements on carrier liability.

"Even if such problems are overcome," said Kriebel, "we are still not going to see a surge of land bridge transportation as long as the multitude of people concerned fail to agree—as they have thus far—on the direction of the economies involved."

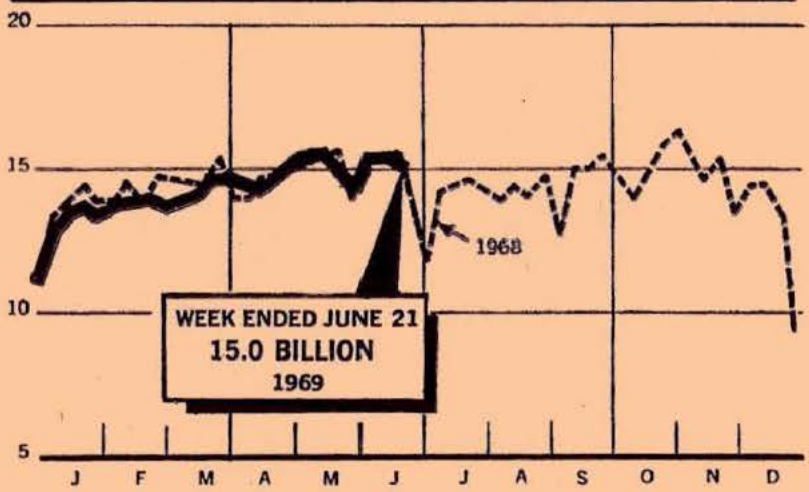
First, noted Kriebel, there is an added expense for the rail operation as well as for unused ship and container capacities as there is more cargo subject to containerization moving eastbound than westbound. Second, transit time differences between land bridge and all-water methods are not great enough to justify a substantial inventory cost benefit; a total land-bridge transaction taking from between 25 to 29 days, while present all-water routes now provide 30-day service. Third are the logistic problems, which are, says Kriebel, colossal. And an associated problem is that the values of the products and commodities likely to utilize the land bridge still do not produce the substantial receiver economic benefits required to encourage taking the logistical risks involved. Then, of course, there is the very real possibility of a substantial volume of cargo being tied up in American labor disputes at the ports.

The participation of steamship lines in the land bridge "method" will depend on their experiences with containerships, Kriebel contends. Until they have had enough experience to know that economic returns are perhaps less than satisfactory, we cannot expect to see them really interested in land bridge services that would sharply reduce their operating revenues.

● **Cost adjustment needed.** Kriebel does not foresee a rush to the land bridge in the very near future, not, he says, with the organizational structures involved in today's international trade. "Until we adjust all of the costs which together would collectively produce a stronger economic attraction to a land bridge system," he said, "I cannot see much likelihood that there will be either a customer who can effectively demand or a supplier who can effectively deliver a going land bridge service in volume." ■

RAIL FREIGHT TRAFFIC TRENDS

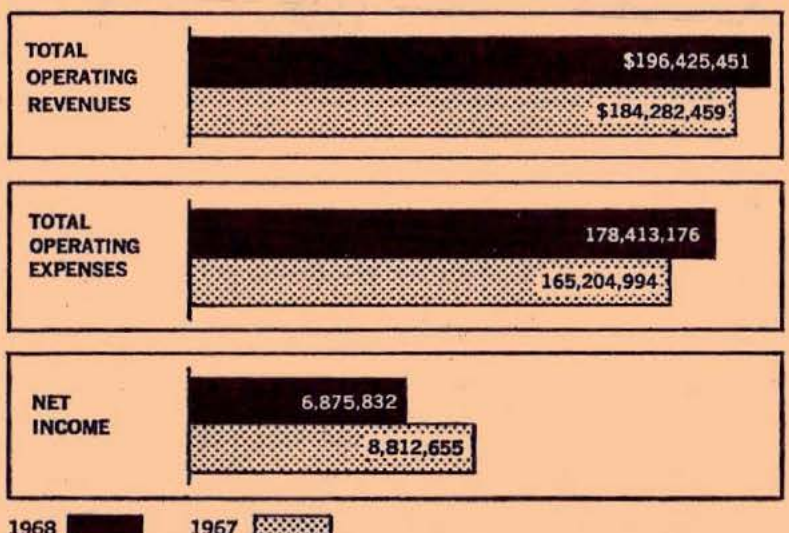
BILLION TON-MILES (Estimated)



Source: Association of American Railroads

FREIGHT FORWARDERS—SELECTED STATISTICS

(CALENDAR YEARS 1968 AND 1967)

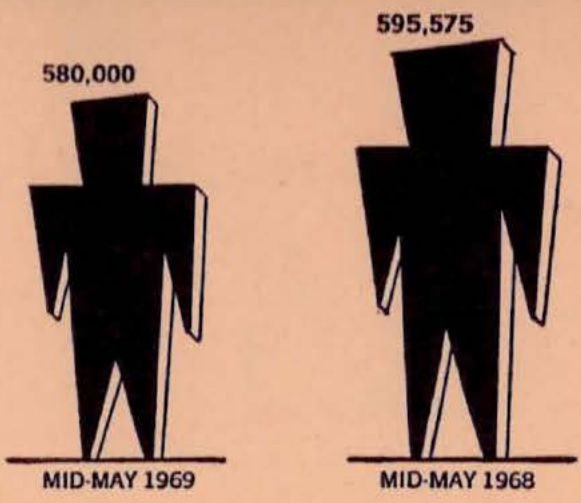


Source: Bureau of Accounts, ICC. Compiled from 62 quarterly reports of forwarders with annual gross revenues of $100,000 or more.

Current Statistics

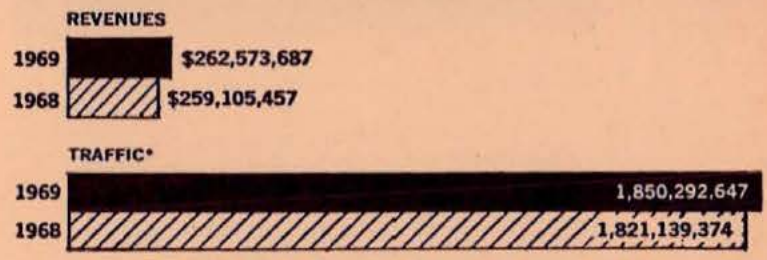
Net Income, Class I roads	
Three months, 1969	$ 97,000,000
Three months, 1968	$111,650,113
New freight cars on order	
June 1, 1969	47,445
June, 1, 1968	19,281
New freight cars delivered	
5 mos., 1969	27,391
5 mos., 1968	26,951
Serviceable cars	
May 1, 1969	1,375,709
May 1, 1968	1,398,772

RAILROAD EMPLOYMENT
(CLASS I LINE-HAUL RAILROADS)



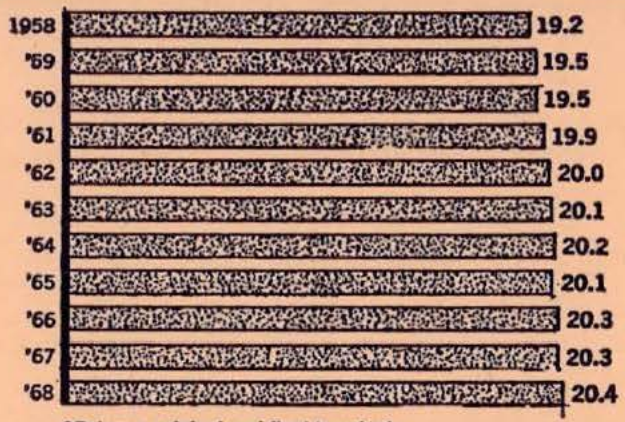
Source: Bureau of Accounts, ICC.

TRANSPORTATION REVENUE AND TRAFFIC OF OIL PIPE LINE COMPANIES
(FIRST QUARTER 1969 AND 1968)



*Barrels of oil originated on line and received from connection. Source: Bureau of Accounts, ICC. Compiled from reports of 84 pipe line companies with annual operating revenues exceeding $500,000.

AVERAGE FREIGHT-TRAIN SPEED*
(CLASS I RAILROADS)



*Between original and final terminals.

Note: Average speed is far below actual running speeds because it includes time spent picking up and setting out cars at intermediate stations, or waiting on sidings to meet opposing trains.

Source: Economics and Finance Dept., AAR.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended June 28 were not available as this issue of Railway Age went to press.

REVENUE FREIGHT CARLOADINGS

Commodity	June 21 week	Preceding week	Per cent change
Grain	26,301	28,182	— 6.7
Farm products	14,884	14,957	— 0.5
Metallic ores	50,636	52,069	— 2.8
Coal	91,483	97,146	— 5.8
Crushed stone, gravel & sand	35,206	35,307	— 0.3
Nonmetallic minerals	11,331	10,998	+ 3.0
Grain mill products	20,000	20,222	— 1.1
Food & kindred products	22,956	23,257	— 1.3
Primary forest products	25,361	26,558	— 4.5
Lumber & wood products (except furniture)	15,922	16,382	— 2.8
Pulp, paper & allied products	25,438	24,983	+ 1.8
Chemicals & allied products	26,744	28,630	— 6.6
Petroleum products	11,656	11,703	— 0.4
Stone, clay & glass products	23,793	23,388	+ 1.7
Coke	8,111	8,053	+ 0.7
Metals & products	29,731	29,733	.....
Motor vehicles & equipment	25,561	25,317	+ 1.0
Waste & scrap materials	15,324	15,550	— 1.5
Forwarder & shipper assn. traffic	7,407	7,578	— 2.3
All other carloads	71,301	69,579	+ 2.5
LCL traffic	1,852	2,101	—11.9
Total cars loaded	560,998	571,693	— 1.9

CUMULATIVE TOTAL, 25 Weeks	1969	1968	1967
	13,351,377	13,483,051	13,496,887

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended June 21 totaled 26,432 cars, carrying 44,382 trailers, compared with 28,071 cars, carrying 45,412 trailers, in the corresponding 1968 week. Loadings for 1969 up to June 21 totaled 636,075 cars, carrying 1,046,107 trailers, compared with 625,574 cars, carrying 1,012,108 trailers, in the corresponding period of 1968.

IN CANADA

Cumulative	Revenue Cars Loaded	Total cars Rec'd from Connections
June 7, 1969	1,582,223	550,595
June 7, 1968	1,591,080	550,486

FREIGHT-TRAIN CARS

● *Orders and deliveries*—Orders were placed in May for 6,263 new freight cars, compared with 20,286 ordered in April and 4,632 in May 1968. There were no rebuilds ordered in May, compared with 565 in April and 575 in May 1968. Backlog of new cars on order and undelivered on June 1 was 47,445, compared with 47,208 on May 1 and 19,281 on June 1, 1968.

FREIGHT TRAIN CARS DELIVERED AND ORDERED IN MAY AND BACKLOG OR ORDERS ON JUNE 1, 1969

DELIVERED

	May 1969	April 1969	May 1968
Built new by car builders	4,667	5,348	2,906
Built new in railroad shops	1,159	1,218	2,088
Built new—total	5,826	6,566	4,994
Rebuilt	496	530	1,102
TOTAL DELIVERED	**6,322**	**7,096**	**6,096**

ORDERED

To be built by car builders	6,203	19,329	2,686
To be built new in railroad shops	60	392	1,371
To be built new—total	6,263	19,721	4,057
To be rebuilt	0	565	575
TOTAL ORDERED	**6,263**	**20,286**	**4,632**

ON ORDER AND UNDELIVERED

	June 1, 1969	May 1, 1969	June 1, 1968
To be built new by car builders	39,628	38,292	10,496
To be built new in railroad shops	7,817	8,916	8,785
To be built new—total	47,445	47,208	19,281
To be rebuilt	2,706	4,001	6,274
TOTAL ON ORDER	**50,151**	**51,209**	**25,555**

TRANSIT

● *New Jersey.*—The state Department of Transportation has announced receipt of bids for construction of 30 new air-conditioned commuter cars and the rehabilitation of 26 stainless-steel passenger coaches—all for use on the Erie Lackawanna. Apparent low bidder for rehabilitation of the 26 coaches was the St. Louis Car Division of General Steel Industries. The bid was $1,228,500. The only other bidder, Pullman-Standard, submitted a bid totaling $1,333,800. Bids for the new cars will require detailed evaluation because of the alternate and optional proposals. These include use of aluminum or stainless steel, various floor plans allowing different door locations, the weights estimated by the car builders, and promised delivery dates. The following bids were received on the new cars: From Pullman-Standard—$5,080,065 for aluminum cars; from St. Louis Car Division—$6,668,672 for stainless steel cars; from Budd—$7,883,614 for stainless steel cars.

NEW FACILITIES

● *Missouri Pacific.*—Ordered 187 railroad "MORTRAN" radio units for road train service from Motorola Communications and Electronics.

YOU OUGHT TO KNOW

Halifax gears for arrival of containers

By 1970, the Nova Scotia port of Halifax will be ready for the container revolution. That year, an ultramodern container terminal will go into operation. But, as a port spokesman commented ruefully last week, the revolution won't wait for Halifax to catch up with it. So a temporary container berth has been established at Pier 1A in Halifax. First big customer: The containership "Joerg Krueger," due from Antwerp and Southampton July 10 with a load of 200 containers. The containers will be swiftly transferred to Canadian National trains, and the first of them will be ready for unloading in Montreal within 24 hours. Establishment of Halifax as a container port has come about as the result of a coordinated operation involving the province of Nova Scotia, the port of Halifax, the National Harbours Board, Canadian National, and a shipping consortium that includes Clarke Traffic Services, Bristol City Lines and Belgian Lines. The consortium operates under the name, Dart Container Lines.

Al Rung heads Public Relations Association

New president of the Railroad Public Relations Association is Albert M. Rung, director of public relations and advertising for the Burlington. Also elected at RPRA's annual meeting at Ponte Vedra, Fla., were Milton B. Dolinger, general manager-news division, Chesapeake & Ohio/Baltimore & Ohio, vice president-eastern region; Frank N. Grossman, assistant manager-public relations, Santa Fe, vice president-western region; and Woodson Knight, manager of publications and company relations for Louisville & Nashville, vice president-southern region. Re-elected secretary-treasurer was John N. Ragsdale, advertising manager, Association of American Railroads.

IC's $4-million microwave goes to work

Illinois Central's $4-million microwave network got its formal unveiling as IC president Alan S. Boyd chatted with IC chairman William B. Johnson in Chicago from the Mays Yard in New Orleans. The system, installed by Lenkurt Electric, will ultimately have a capacity of 420 voice channels. And, in a further move to improve communications capabilities, the IC system and the Southern Pacific's system will be interconnected at Memphis. Thus, IC will be able to communicate with its traffic office at Portland, Ore. via SP microwave, for example, and SP will be able to reach its Chicago office through the IC's system.

Johns Hopkins will study control systems

Transportation Secretary John A. Volpe has announced a $750,000 grant to Johns Hopkins University to "produce communication and control systems for the various automated transportation networks now under development." Said Volpe: "The process of attaining previously undreamed of speed and comfort in our network of public transportation has progressed from the inventor's and designer's drawing boards to highly promising experimental vehicles. Equally important to attaining speed and increased mobility is the ability to control movement in order that the so-called 'exotic' demonstration vehicles of today can be developed into the efficient public transit networks of tomorrow."

Intermodal offers its own TOFC/container

Intermodal Transportation Systems, Inc., a new company in the transportation and financing field, offers a variety of services that includes the leasing of its own specially designed Intermodal Units that can be used as TOFC trailers with wheels and as maritime containers without wheels. Palmer Bayer, Intermodal's president and chief executive officer, said that the Intermodal Unit is "a relatively new concept in containerization and represents the future trend of the freight carrying business." The company also leases standard containers and TOFC trailers and equipment control systems using automatic car identification.

PEOPLE IN THE NEWS

BALTIMORE & OHIO.—John Dugan, district manager—coal traffic, appointed regional sales manager—coal traffic, with jurisdiction over the Boston area, other parts of New England, the New York metropolitan area and eastern New York, with headquarters as before at New York.

Charles E. Schroeder, regional sales manager, appointed manager—iron ore traffic—system, with headquarters as before at Pittsburgh.

BELT RAILWAY OF CHICAGO.—W. J. Cassidy, auditor, elected controller. Title of auditor abolished.

BESSEMER & LAKE ERIE—DULUTH, MISSABE & IRON RANGE—ELGIN, JOLIET & EASTERN—LAKE TERMINAL—UNION.—John J. Snyder appointed administrative assistant, Pittsburgh, Pa. Mr. Snyder was formerly manager labor relations, B&LE, Greenville, Pa.

BRITISH COLUMBIA HYDRO & POWER AUTHORITY.—William A. Duncan, railway superintendent, appointed assistant freight traffic manager, railway department, effective May 17. Mr. Duncan will act as assistant to **Stuart B. Peach,** who moved temporarily from revenue and disbursement manager back to direct the freight traffic operations following the death of **R. R. Johnston** early this year. On Sept. 1 Mr. Duncan will assume full responsibility for the freight traffic section of the railway and Mr. Peach will resume his former duties. **Harold L. Bergstrom,** assistant superintendent and instructor, succeeds Mr. Duncan as railway superintendent. **John A. Beer,** who has served in various positions with the railway for the past 12 years, succeeds Mr. Bergstrom.

BURLINGTON.—C. K. Smith named district storekeeper, Aurora, Ill., to replace **J. Simoncik,** promoted.

Donald L. Buchholz, freight sales representative, Denver, appointed industrial agent, Chicago.

T. E. Henderson named district storekeeper, Chicago, succeeding **E. F. Molbeck,** retired.

CANADIAN FREIGHT ASSOCIATION.—P. J. Lavallee appointed chairman, Montreal, Que., succeeding **W. P. Coughlin,** who retired May 31, after more than 50 years' service to the railway industry.

CANADIAN NATIONAL.—N. A. R. Hanks, assistant general superintendent transportation—technical, Great Lakes Region, Toronto, appointed operations manager, Northern Ontario area, Capreol, succeeding **James F. Weaver,** transferred to the Southwestern Ontario area, to replace **R. A. Walker,** now on the Prairie Region.

E. B. LeMaistre, manager—steam services, St. Lawrence Region equipment function, appointed mechanical engineer—shops, system, Montreal. **C. H. Henningsen** has completed his special assignment as co-ordinator—car information project and has returned to his former position as general supervisor car service.

L. R. Nix, terminal traffic manager, Belleville, Ont., appointed manager—carload and express claims, Great Lakes Region, Toronto, succeeding **T. R. Fell** (RA, May 26, p. 42). The review and study of motor vehicle claims to which **D. Smith** was temporarily assigned at system headquarters has been completed and he has resumed duties as assistant manager, carload and express claims, Toronto. **R. S. MacKay** has resumed the position of co-ordinator, loss and damage prevention. **W. Mowat** and **S. Hardy** have resumed positions of loss and damage prevention supervisors.

L. R. Waller, administrative assistant, appointed senior internal auditor, Great Lakes Region, Toronto, and his former position abolished.

W. J. Long, personnel assistant, appointed assistant labor relations officer, Great Lakes Region, Toronto, succeeding **M. A. Matheson,** promoted. **G. C. D. Eagles,** employee relations assistant, Toronto Area, succeeds Mr. Long.

Title changes, St. Lawrence Region, Montreal: **C. R. Battley,** supervisor motive power, now mechanical officer motive power; **W. Cameron,** mechanical and electrical engineer, now engineering and planning officer; **N. J. Olsen,** mechanical engineer, now engineer—equipment; **R. Carpenter, C. Wills** and **G. Belanger,** assistant mechanical engineers, now mechanical engineers; **H. Blanchette** and **C. Menard,** assistant electrical engineers, now electrical engineers.

CANADIAN NATIONAL - GRAND TRUNK WESTERN.—Carl K. Kreuchauf named district sales manager, St. Louis, succeeding **Maurice F. Alexander,** retired.

CHICAGO & NORTH WESTERN.—M. R. Long, general superintendent-transportation, Chicago, named assistant general manager with responsibility for the Missouri, Iowa, Western and Central divisions. Mr. Long's successor is **E. A. Burkhardt,** assistant general manager. **John C. Danielson,** assistant general counsel, named assistant to vice president-operations. Among Mr. Danielson's responsibilities will be the former duties of Mr. Burkhardt. **W. G. Kranz,** assistant general manager, assigned responsibility for the Twin Cities, Lake Shore, Wisconsin, Galena and Terminal divisions.

CLINCHFIELD.—A. E. Mooney named senior assistant engineer, Erwin, Tenn.

DELAWARE & HUDSON.—Bernard Phillips appointed assistant general freight agent, Albany, N. Y.

FLORIDA EAST COAST.—G. A. Tonsager appointed director, sales and service, Miami, Fla. On June 1, abolished position of director, off-line sales and service, Chicago.

MISSOURI PACIFIC-MISSOURI PACIFIC TRUCK LINES. INC.—R. C. Turnbow named terminal manager, Corpus Christi, Tex.

(Continued on page 54)

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MISSOURI PACIFIC-TEXAS & PACIFIC.—W. D. Spencer appointed manager of auditing, St. Louis.

L. V. Richards named assistant manager, special freight equipment and services, St. Louis.

ROCK ISLAND.—William L. Myers, assistant regional manager-pricing, named assistant to manager-pricing.

SANTA FE.—W. W. Toliver, district engineer, Los Angeles, named regional engineer there, to succeed **C. L. Holman,** promoted. **J. J. Parrish,** division engineer, Fresno, Calif., replaces Mr. Toliver, and will have jurisdiction over the Los Angeles Terminal and Valley divisions.

J. D. Johnson named acting superintendent of better freight handling and special service, Topeka, Kans., replacing **G. A. Ossian,** appointed special assistant to general manager, Topeka.

Thomas J. Powers named assistant general auditor, Chicago. He was formerly regional controller, **Penn Central.**

Harry S. Meislahn named director, cost analysis and research, Chicago. Mr. Meislahn was formerly director-marketing and research, Milwaukee.

SEABOARD COAST LINE.—Gen. Norman H. Vissering, assistant vice president—traffic, Orlando, Fla., retired May 15.

Benjamin H. Hansen, assistant to treasurer, named assistant treasurer, Richmond, Va.

George M. Gallamore, Jr., and **Robert W. Parsons, Jr.,** commerce agents, appointed assistant general freight agents, remaining at Richmond.

SOUTHERN.—Robert E. Loomis appointed assistant vice president—labor relations, Washington, D.C. Mr. Loomis has been active in labor relations matters since 1945 with railroads owned by United States Steel Corp.

Robert A. Wharton, general manager—transportation, appointed assistant vice president—operations planning, with headquarters remaining at Atlanta, Ga.

Dudley A. Gore, superintendent of terminals, Spencer, N.C., promoted to superintendent of terminals, Birmingham, Ala.

Samuel D. Hammett appointed assistant material handling manager, Sevier Yard, Tenn.

Alan R. O'Brien appointed a special assistant, Security and Special Services, Washington, D.C.

SOUTHERN FREIGHT ASSOCIATION.—J. P. Roberts elected member, Standing Rate Committee.

SOUTHERN PACIFIC.—B. M. Stephens, Jr., assistant general manager, retires June 30 after more than 42 years' service.

Vincent R. Erquiaga, assistant general superintendent maintenance of way shops and equipment, Oakland, Calif., promoted to general superintendent maintenance of way shops and equipment there, succeeding **Theodore S. Bean,** who retired May 31 after more than 46 years of service. **Murlin W. Adams** succeeds Mr. Erquiaga.

SPOKANE INTERNATIONAL.—Water P. Barrett elected vice president—rates and and divisions, Omaha, Neb.

UNION PACIFIC.—Wallace R. Tuel, general superintendent, Northwestern District, named special representative to the vice president-operation, Omaha. **Robert L. Richmond,** superintendent, Utah division, succeeds Mr. Tuel, and in turn is succeeded by **Harold H. Brandt,** transferred from the Nebraska division. Mr. Brandt's successor is **Jack E. Petersen,** assistant superintendent, Oregon division. **E. C. May,** trainmaster, Cheyenne, Wyo., transferred to Grand Island, Neb. **J. R. Davis,** assistant superintendent safety and courtesy, Kansas City, Kans., named trainmaster, Salt Lake City.

R. E. Hautzinger, traffic manager, Salt Lake City, transferred to San Francisco, to succeed **Madison H. Fowler,** who retired Apr. 30 after more than 46 years' service. Mr. Hautzinger's successor is **W. H. Whalen. N. J. Meis** named general freight and passenger agent, Denver. **J. B. Delapoer** appointed general traffic agent, Salt Lake City.

WESTERN PACIFIC. — Teruo Murakami named WP's marketing representative in Japan. He will have headquarters in Tokyo.

OBITUARY

Don B. Alexander, 80, vice president **International Supply Co.,** Chicago, died at his home in Cleveland on June 24.

Frank L. Etchison, retired assistant to president-engineering, **Western Maryland,** and formerly chief engineer of that road, died June 20.

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VIEWPOINT

Unity: No longer an impossible dream

Last week's report by DOT's task force on rail safety reached a number of important conclusions. These were reflected in the group's eight recommendations (p. 12). But the report itself can stand as a general conclusion that is more significant than any of the specific ones. That conclusion is simply that, when the chips are down, interests as conflicting as those represented in the task force can still work together.

Task force members are the first to acknowledge that fact. "Recognizing that there have been long-standing differences among the three groups represented, the parties sought to emphasize areas of agreement rather than disagreement, plus their mutuality of interest in railroad safety," the report says.

Consequently, the labor, management and state-commission representatives, under the direction of FRA Administrator Reginald N. Whitman, were able to reach an important "consensus view."

Reflections of that can be found in reactions to the report. Thomas M. Goodfellow, president of the Association of American Railroads and sub-chairman of the task force, says: "This is a sensible report. It's proof of what can be accomplished when management, labor and government representatives of the public take a reasonable view of problems in which all have a stake."

Another man who comments is Transportation Secretary John A. Volpe. He was the one who launched the task force just two and a half months ago. Volpe points out that there were a lot of skeptics who thought agreement would be impossible. However, from the beginning Volpe believed that the parties most involved with rail safety could offer the most expert advice on what the government should do.

To task force members, Volpe says: "The unified report and recommendations you have presented do much more than prove the skeptics wrong. You have demonstrated that railroad management, labor and the state regulatory bodies can put aside whatever differences they may have, and achieve a common view in the public interest.

"The nation should duly note and appreciate the statesmanship that has produced this report."

Volpe points out that the report by itself does not solve the safety problem. Rather, it is a significant beginning. "Whatever steps we can take will require the same selfless public spirit that you have exhibited in producing this report."

KEEPING THE COOPERATIVE APPROACH

Those steps are outlined in the "sensible" eight-point plan, as Goodfellow calls it, which was the product of willingness to give and take. One of those points calls for a permanent advisory body. Goodfellow sees this as an extension of the task force because it "would project the same approach when the time comes to consider specific regulations." He adds: "The railroads also agree wholeheartedly with the recommendations of research, employee training and accident reporting." That's the kind of agreement that Volpe looked forward to when he went ahead with what the skeptics called an impossible dream.

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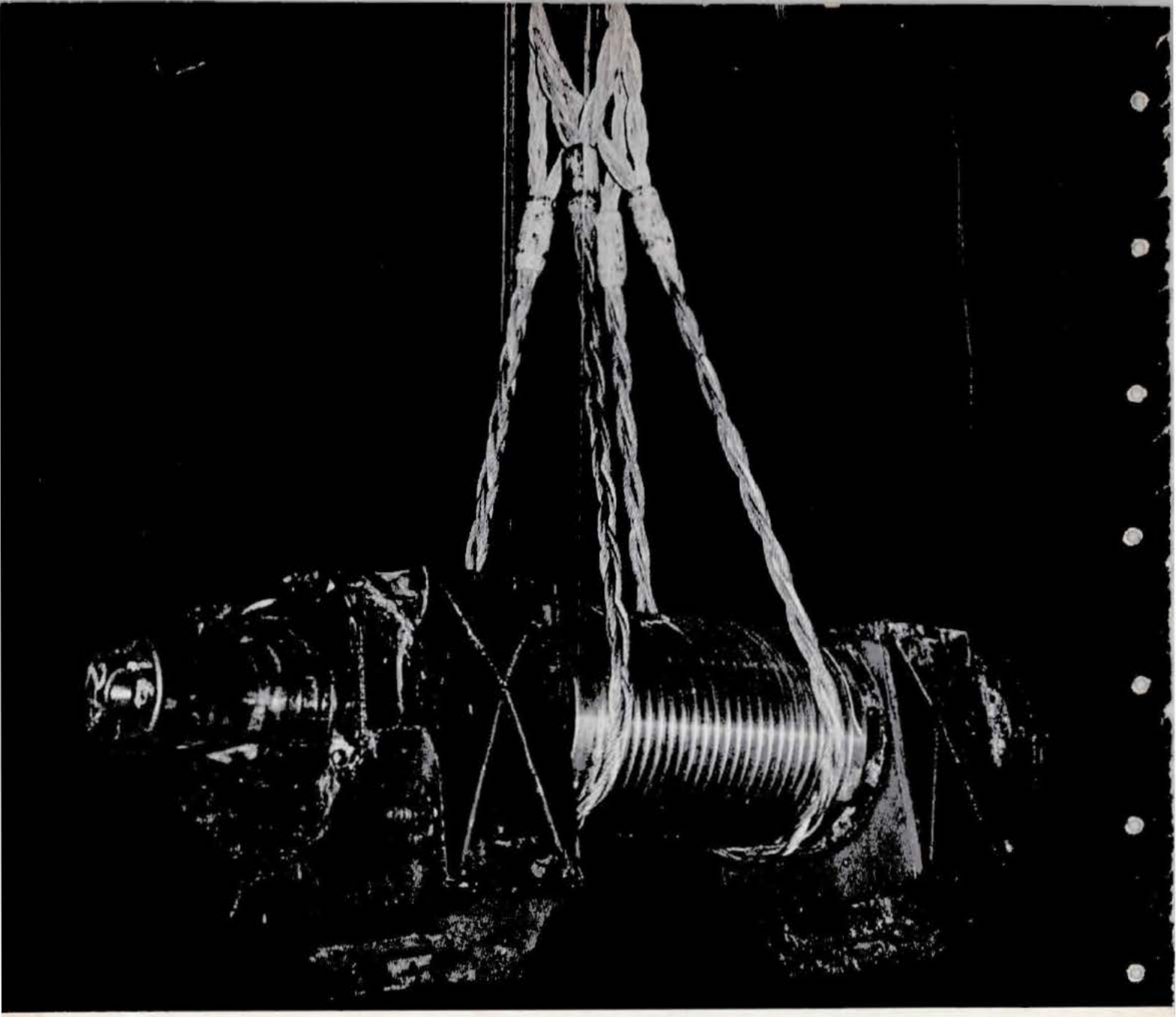

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